Modal Profiles

Appendix A Modal Profiles ◀ 321

Air Carrier Profile

Financial	1960	1970	1980	1990	1995	1996	1997	^R 1998	P1999
Operating revenues (thousand dollars)									
Domestic total ^{a,b}	2,178,339	^R 7,180,161	26,440,297	57,960,508	70,885,050	76,890,526	82,249,568	86,493,789	90,517,576
Majors, all services	^e 1,942,635	e _{6,272,775}	^f 23,012,073	^h 53,333,552	^h 64,317,169	^h 70,036,709	^h 74,942,391	^h 77,650,810	^h 80,797,402
Nationals, all services	146,481	736,831	3,182,418	ⁱ 4,167,552	ⁱ 5,935,773	ⁱ 5,990,391	ⁱ 6,163,458	ⁱ 8,113,690	ⁱ 8,933,847
Large regionals, all services	N	N	245,806	^j 459,404	^j 632,108	^j 863,426	^j 1,143,719	^j 729,289	^j 786,328
International total	705,938	2,109,497	6,442,144	17,990,355	23,433,483	25,046,820	27,318,034	26,971,289	27,809,573
Majors, all services	705,938	2,109,497	^g 5,976,221	^h 16,761,376	^h 19,892,111	^h 21,524,274	^h 23,608,853	^h 23,356,233	^h 24,446,105
Nationals, all services	N	N	465,923	ⁱ 901,352	ⁱ 3,282,606	ⁱ 3,326,467	ⁱ 3,376,014	ⁱ 3,161,212	ⁱ 2,954,249
Large regionals, all services	N	N	N	^j 327,627	^j 258,766	^j 196,079	^j 333,166	^j 453,844	^j 409,219
Total certificated ^a	R2,884,877	R9,289,658	32,882,441	75,950,863	94,318,533	101,937,346	109,567,602	113,465,078	118,327,149
Operating expenses (thousand dollars)									
Domestic total ^a	2,052,094	7,001,668	26,465,999	58,953,086	66,119,699	71,573,073	75,731,215	78,388,515	84,344,125
Majors, all services	1,907,785	6,256,039	^f 23,150,527	^h 54,209,401	^h 59,721,080	^h 64,793,763	^h 68,307,270	^h 70,114,852	^h 75,244,844
Nationals, all services	144,309	745,629	3,058,289	ⁱ 4,297,823	ⁱ 5,750,372	ⁱ 5,847,797	ⁱ 6,163,923	ⁱ 7,500,451	ⁱ 8,342,749
Large regionals, all services	N	N	257,183	^j 445,862	^j 648,247	^j 931,513	^j 1,260,021	^j 773,212	^j 756,532
International total	665,660	2,065,605	6,642,095	18,914,480	22,335,257	24,155,203	25,249,593	25,748,752	26,132,232
Majors, all services	665,660	2,065,605	^g 6,171,366	^h 17,746,006	^h 19,061,258	^h 20,807,517	^h 21,688,642	^h 22,321,441	^h 23,048,059
Nationals, all services	N	N	470,729	ⁱ 853,361	ⁱ 3,025,707	ⁱ 3,166,097	ⁱ 3,253,249	ⁱ 3,014,282	ⁱ 2,698,045
Large regionals, all services	N	N	N	^j 315,113	^j 248,292	^j 181,589	^j 307,702	^j 413,029	^j 386,129
Total certificated ^a	2,717,754	9,067,273	33,108,094	77,867,566	88,454,956	95,728,276	100,980,807	104,137,267	110,476,358
Inventory ^c									
Number of carriers				1-				1-	
Total domestic and international	^k 55	^k 39	kR ₆₆	^{kR} 59	kR89	^{kR} 90	^{kR} 82	^{kR} 81	^k 84
Majors	N	N	^R 14	12	11	12	13	13	13
Nationals	N	N	^R 18	^R 15	^R 27	^R 31	31	^R 28	33
Regionals	N	N	^R 34	^R 32	^R 51	^R 47	^R 38	^R 40	38

KEY: N = data do not exist; R = revised; U = data are not available

Air Carrier Profile

Inventory cont'd	1960	1970	1980	1990	1995	1996	1997	^R 1998	^P 1999
Number of aircraft available for service									
Total domestic and international	¹ 2,135	¹ 2,690	^l 2,818	¹ 4,727	¹ 5,567	¹ 5,961	^l 5,770	¹ 6,144	¹ 6,254
Majors	N	N	2,071	3,854	4,039	4,422	4,352	4,605	4,711
Nationals	N	N	432	650	1,143	1,167	967	1,113	1,319
Regionals	N	N	315	223	385	372	451	426	224
Number of employees									
Total domestic and international	^k 169,872	^k 304,690	^k 354,264	^k 588,926	^{k R} 610,363	^k 634,866	^{kR} 656,243	^{kR} 696,202	^k 728,495
Majors	118,189	214,021	318,973	549,100	533,313	564,631	597,953	623,389	650,267
Nationals	12,470	24,913	29,922	32,077	59,444	56,586	^R 47,662	^R 59,414	68,138
Regionals	N	N	5,369	7,749	^R 17,606	13,649	^R 10,628	^R 13,399	10,090
Performance									
Aircraft revenue-miles (thousands) Domestic ^b									
Certificated, all services ^a	^m 858,451	^m 2,067,598	ⁿ 2,523,375	° 3,963,263	°4,629,394	°4,811,453	°4,910,948	°5,034,691	°5,308,533
Major, all services ^a	716,961	1,778,065	2,113,669	^p 3,547,339	^p 3,953,287	p _{4,083,664}	^p 4,191,113	^p 4,260,052	^p 4,445,131
Nationals, all services ^a	94,794	247,055	330,528	^q 351,946	^q 569,641	^q 614,519	^q 594,241	^q 702,913	^q 781,351
Large regionals, all services ^a	N N	217,000 N	56,995	ⁿ 60,542	ⁿ 85,363	ⁿ 96,573	ⁿ 112,682	ⁿ 51,199	ⁿ 57,360
International									
Certificated, all services ^a	181,605	474,666	^r 400,971	^s 760,338	^s 997,658	^s 1,043,313	^s 1,113,816	^s 1,192,489	s _{1,223,177}
Major, all services ^a	N	., 1,000 N	330,391	^q 666,231	^q 822,283	^q 859,483	^q 917,109	^q 1,003,726	q ₁ ,043,737
Nationals, all services ^a	N	N	66,499	t48,812	^t 141,870	^t 150,147	^t 145,821	t 145,494	t 137,996
Large regionals, all services ^a	N	N	2,948	^u 60,542	^u 27,761	^u 22,519	^u 47.138	^u 40,398	^u 35,766
Medium regionals, all services,			_,,				,		
domestic and international a	N	N	23,204	^v 9,017	^v 28,847	^v 27,861	^v 16,660	^v 21,024	^v 30,369
Total certificated ^a	1,040,056	2,542,264	2,924,346	4,723,601	5,627,052	5,854,766	6,024,764	6,227,180	6,531,710
Aircraft revenue-hours Domestic ^b									
Certificated, all services ^a	3,672,900	5,133,161	ⁿ 6,247,795	° 9,717,375	°11,378,134	°11,871,886	°12,060,253	°12,445,483	°13,040,149
Major, all services ^a	2,802,317	4,066,480	4,941,327	^p 8,524,236	^p 9,257,260	^p 9,584,525	^p 9,828,418	^p 9,957,390	^p 10,349,988
Nationals, all services ^a	606,146	908,935	919,187	^q 1,016,491	^q 1,839,835	^q 1,981,219	^q 1,882,975	^q 2,299,916	^q 2,472,930
Large regionals, all services ^a	N	N	267,522	ⁿ 167,826	ⁿ 223,007	ⁿ 260,985	ⁿ 315,506	ⁿ 143,197	ⁿ 153,616

KEY: N = data do not exist; R = revised; U = data are not available

Appendix A Modal Profiles ◀ 323

Air Carrier Profile

Performance cont'd	1960	1970	1980	1990	1995	1996	1997	^R 1998	^P 1999
International									
Certificated, all services ^a	608,736	977,325	^r 819,518	^s 1,556,760	^s 2,021,060	^s 2,113,467	^s 2,235,441	^s 2,394,095	^s 2,452,176
Major, all services ^a	N	N	668,199	^q 1,351,349	^q 1,634,465	^q 1,712,416	^q 1,819,583	^q 1,992,776	^q 2,071,513
Nationals, all services ^a	N	N	140,329	່ 101,533	^t 314,066	່ 329,311	^t 309,948	່ 311,540	^t 289,523
Large regionals, all services ^a	N	N	7,583	^u 88,641	^u 59,572	^u 48,619	^u 97,304	^u 83,437	^u 75,851
Medium regionals, all services,									
Domestic and international a	N	N	123,411	^v 24,059	^v 70,989	^v 68,278	^v 41,960	^v 51,322	^v 78,904
Total certificated ^a	4,281,636	6,110,486	7,190,724	11,298,194	13,399,194	13,985,353	14,295,694	14,839,578	15,492,325
Revenue passenger-miles (thousands)									
Domestic ^b									
Certificated, all services	31,098,944	108,441,978	ⁿ 204,367,599	° 345,872,950	o403,887,802	°434,651,687	°450,612,482	o463,262,198	°487,905,650
Majors, all services	29,430,428	99,903,229	182,984,795	^p 327,112,620	^p 368,701,100	^p 395,099,254	^p 410,906,050	^p 421,217,665	^p 440,441,958
Nationals, all services	1,170,779	7,642,071	20,466,712	^q 16,756,818	^q 29,255,179	^q 33,000,546	^q 33,241,082	^q 37,699,063	^q 43,040,816
Large regionals, all services	N	N	711,868	ⁿ 1,752,615	ⁿ 4,381,267	ⁿ 5,443,071	ⁿ 5,778,338	ⁿ 3,124,802	ⁿ 3,205,805
International									
Certificated, all services	m8,950,672	m39,695,392	^r 63,354,387	^s 126,362,697	^s 154,869,249	^s 161,512,010	^s 169,356,100	^s 172,255,197	^s 180,263,824
Majors, all services	N	N	54,318,160	^q 1 ₁ 18,268,507	^q 137,986,520	^q ,145,330,811	^q 153,564,956	^q 157,398,986	^q 166,321,018
Nationals, all services	N	N	8,659,592	՝ 6,794,533	່ 16,128,695	՝ 14,681,127	¹ 13,616,245	່ 13,471,798	່ 11,498,538
Large regionals, all services	N	N	330,288	^u 1,219,706	^u 676,925	^u 505,337	^u 2,148,486	^u 1,097,330	^u 2,034,607
Medium regionals, all services, domestic and international a	N	N	250,571	^v 330,848	^v 1,627,365	^v 2,103,551	^v 713,425	^v 1,507,751	^v 1,626,732
Total certificated a	40,049,616	148,137,370	267,972,557	472,566,495	558,757,051	596,163,697	619,968,582	635,517,395	668,169,474
Average passenger revenue/passenger-mile									
(Domestic, scheduled service)	6.09	6.00	11.49	13.43	13.48	13.76	13.97	14.08	13.96
Average passenger fare									
(Domestic, scheduled service)	30.01	40.65	84.60	107.86	106.66	110.37	114.10	114.34	114.99

KEY: N = data do not exist; R = revised; U = data are not available

Air Carrier Profile

Performance cont'd	1960	1970	1980	1990	1995	1996	1997	^R 1998	^P 1999
Revenue passenger enplanements (thousands)									
Domestic ^b									
Certificated, all services ^a	^m 56,352	^m 153,662	ⁿ 275,182	°428,767	°506,789	°538,394	°548,735	°566,951	°588,601
Major, all services ^a	48,678	122,866	223,237	^p 393,927	^p 441,650	^p 466,743	^p 478,253	^p 486,903	^p 502,305
Nationals, all services ^a	5,949	26,726	47,145	^q 32,015	^q 55,656	^q 62,183	^q 61,316	^q 74,281	^q 80,504
Large regionals, all services ^a International	N	N	3,748	ⁿ 2,566	ⁿ 7,136	ⁿ 7,887	ⁿ 8,203	ⁿ 4,352	ⁿ 4,254
Certificated, all services ^a	5,904	16,620	^r 26,514	s 46,126	^s 52,864	^s 54,515	s 56,767	^s 57,759	^s 57,699
Major, all services	5,904 N	10,020 N	23,949	q _{42,207}	q _{44,155}	q46,302	q48,614	q _{49,610}	q _{49,768}
Nationals, all services	N	N	2,343	^t 2,632	^t 8,114	^t 7,401	^t 6,896	^t 7,038	^t 6,279
Large regionals, all services ^a	N	N	149	^u 1,246	^u 556	^u 405	^u 1,231	^u 940	^u 1,322
Medium regionals, all services,									
domestic and international a	N	N	1,125	^v 300	^v 2,386	^v 1,988	^v 989	^v 1,586	^v 1,868
Total certificated ^a	62,256	169,922	302,821	475,193	559,653	592,909	605,502	624,710	646,300
Revenue passenger									
Load factor (%) (scheduled service)									
Domestic ^b									
Certificated	58.5	48.9	ⁿ 58.0	°60.4	°65.4	° 67.9	°69.1	°70.0	°69.8
Majors	59.5	49.3	58.1	^p 60.6	^p 65.7	^p 68.5	^p 69.7	^p 70.4	^p 70.2
Nationals	41.9	43.6	58.4	^q 56.6	^q 61.9	^q 61.5	^q 63.2	^q 65.1	^q 66.1
Large regionals	N	N	47.7	ⁿ 48.7	ⁿ 56.0	ⁿ 60.4	ⁿ 60.7	ⁿ 58.8	ⁿ 58.7
International									
Certificated	62.2	53.0	^r 62.8	^s 69.1	^s 71.8	^s 73.3	^s 74.1	^s 72.8	^s 74.4
Majors	N	N	62.8	^q 69.1	^q 72.1	^q 73.7	^q 74.4	^q 72.9	^q 74.5
Nationals	N	N	65.5	^t 73.4	^t 67.7	^t 67.8	^t 69.6	^t 70.9	^t 73.8
Large regionals	N	N	73.9	^u 66.5	^u 44.5	^u 0.0	^u 64.9	^u 46.0	"U
Medium regionals, all services, domestic and international ^a	N	N	^v 46.7	^v 0.0	^v 59.3	^v 66.7	^v 49.7	^v 58.2	^v 48.4

KEY: N = data do not exist; R = revised; U = data are not available

Appendix A Modal Profiles ◀ 325

Air Carrier Profile

Performance cont'd	1960	1970	1980	1990	1995	1996	1997	^R 1998	P1999
U.S. international passenger travel									
Total passenger-arrivals (thousands)									
Flag of carrier									
United States	^w 1,332	^w 5,531	^x 10,031	[×] 19,145	^y 24,582	^x 25,148	^x 26,744	[×] 27,390	^x 27,462
Foreign	1,234	4,343	10,231	17,269	22,328	24,704	27,571	28,791	30,324
Total passenger-departures (thousands)									
Flag of carrier									
United States	1,200	4,949	9,369	17,628	22,231	22,901	24,302	24,513	25,457
Foreign	1,136	4,147	9,886	16,418	20,795	22,884	25,382	26,350	28,399
Total revenue ton-miles (thousands) ^d									
Domestic ^b									
Certificated, all services	^m 3,732,949	^m 13,876,802	ⁿ 24,964,907	°43,651,162	°52,910,081	°56,326,750	°58,658,887	°60,199,459	°62,743,196
Majors, all services	3,332,483	12,589,057	21,427,534	^p 39,107,033	^p 47,015,642	^p 50,096,661	^p 52,254,323	^p 53,424,349	^p 55,599,771
Nationals, all services	121,157	850,477	3,336,057	^q 3,561,283	^q 4,996,345	^q 231,398	^q 5,317,576	^q 6,012,665	^q 6,327,438
Large regionals, all services	N	N	180,042	ⁿ 945,929	ⁿ 718,659	ⁿ 863,449	ⁿ 971,942	ⁿ 508,172	ⁿ 584,773
International									
Certificated, all services	1,291,336	6,308,701	^r 9,689,067	^s 19,975,915	^s 26,295,684	^s 28,177,721	^s 30,944,299	^s 31,481,513	^s 32,780,309
Majors, all services	N	N	7,377,733	^q 17,803,825	^q 21,517,789	^q 22,880,295	^q 24,971,379	^q 25,794,344	^q 27,764,472
Nationals, all services	N	N	2,261,534	^t 1,229,849	^t 4,116,380	^t 4,603,920	4,657,365 ^t	4,376,654 ^t	^t 4,123,176
Large regionals, all services	N	N	44,438	^u 835,701	^u 513,476	^u 396,142	^u 1,240,303	^u 1,269,602	^u 830,782
Medium regionals, all services domestic and international ^a	N	N	28,178	^v 143,457	^v 327,474	^v 432,606	^v 190,298	^v 265,186	^v 293,093
Total certificated ^a	5,024,285	20,185,503	34,682,153	63,770,534	79,205,765	84,504,471	89,603,186	91,650,972	95,523,505
Revenue ton-miles of freight (thousands)									
Domestic ^b			n	0	0	0	0	0	0
Certificated, all services	552,756	2,708,900	ⁿ 4,528,316	° 9,063,864	^o 12,520,057	^o 12,860,845	^o 13,601,412	°13,839,605	o 13,957,599
Majors, all services	321,176	U	3,129,087	^p 6,395,767	^p 10,145,537	^p 10,586,741	^p 11,163,518	^p 11,302,583	^p 11,555,578
Nationals, all services	3,850	U	1,289,510	^q 1,885,600	^q 2,070,570	^q 1,931,201	^q 1,993,498	^q 2,239,140	^q 2,023,150
Large regionals, all services	N	N	108,864	ⁿ 770,670	ⁿ 280,512	ⁿ 318,542	ⁿ 398,153	ⁿ 195,791	ⁿ 269,628

KEY: N = data do not exist; R = revised; U = data are not available

Air Carrier Profile

Performance cont'd	1960	1970	1980	1990	1995	1996	1997	^R 1998	^P 1999
International									
Certificated, all services	^m 268,156	^m 1,566,105	^r 3,353,371	^s 7,339,660	^s 10,854,620	^s 12,031,634	^s 14,008,685	^s 14,262,373	^s 14,752,926
Majors, all services	N	N	1,945,660	^q 5,976,973	^q 7,719,138	^q 8,347,214	^q 9,614,881	^q 10,054,448	^q 11,132,370
Nationals, all services	N	N	1,395,575	^t 550,409	^t 2,549,371	^t 3,140,921	^t 3,295,738	^t 3,035,853	^t 2,972,323
Large regionals, all services	N	N	11,409	^u 713,733	^u 445,783	^u 345,609	^u 1,025,455	^u 1,159,869	^u 627,320
Medium regionals, all services, domestic and international ^a	N	N	3,124	^v 110,372	^v 163,766	^v 222,251	^v 118,854	^v 114,294	^v 130,156
Total certificated ^a	820,907	3,755,436	7,884,811	16,513,896	23,374,677	24,892,479	27,610,097	28,101,978	28,710,525
Safety									
Air carrier fatalities									
Operating under 14 CFR 121 (airlines)									
Scheduled services	N	N	^z 0	^z 39	^z 166	^z 342	^z 3	^z 1	^z 12
Nonscheduled services	N	N	1	0	2	38	5	0	0
Operating under 14 CFR 135									
Scheduled services (commuters)	N	N	37	7	9	14	46	0	12
Nonscheduled services								_	
(on-demand air taxis)	N	N	105	51	52	63	39	^R 48	38
Total ^a	^{AA} 499	^{AA} 146	143	97	229	457	93	49	62
Air carrier accidents									
Operating under 14 CFR 121 (airlines)									
Scheduled services	N	N	15	22	34	32	44	^R 43	48
Nonscheduled services	N	N	4	2	2	6	5	7	4
Operating under 14 CFR 135									
Scheduled services (commuters)	N	N	38	15	12	11	^R 17	8	13
Nonscheduled services									
(on-demand air taxis)	N	N	171	107	75	90	82	^R 77	76
Total ^a	AA 90	AA ₅₅	^R 228	146	123	139	148	^R 135	141

KEY: N = data do not exist; R = revised; U = data are not available

Air Carrier Profile

Safety cont'd	1960	1970	1980	1990	1995	1996	1997	^R 1998	P1999
Fatal air carrier accidents									_
Operating under 14 CFR 121 (airlines)									
Scheduled services	N	N	0	6	2	3	3	1	2
Nonscheduled services	N	N	1	0	1	2	1	0	0
Operating under 14 CFR 135									
Scheduled services (commuters)	N	N	8	4	2	1	5	0	5
Nonscheduled services								_	
(on-demand air taxis)	N	N	46	29	24	29	15	^R 18	12
Total ^a	AA 17	AA ₈	55	39	29	35	24	^R 19	19

^a Totals include data not in table; thus totals may not be sum of table data.

All other operations are considered international.

SOURCES: Unless otherwise noted, refer to chapter tables for sources

^o U.S. Department of Transportation, Bureau of Transportation Statistics,

U = data are not available (pre-1995, U.S. Department of Transportation, Research and Special Programs Administration), Air Carrier Traffic Statistics, December 1991/1990, 1992/1991. 1993/1992, 1994/1993, 1995/1994, 1996/1995, 1997/1996, 1998/1997, 1998/1999 (Washington, DC), p. 2.

KEY: N = data do not exist; R = revised;

^b Domestic encompasses operations within and between the 50 states of the United States, the District of Columbia, Puerto Rico and the Virgin Islands. It also encompasses Canadian and Mexican transborder operations (U.S. airlines only).

^c Includes scheduled and nonscheduled (charter) operators. By Sec. 2 of the Airline Deregulation Act of 1978 "charter air carrier" and "charter air transportation" replaced supplemental air carriers and supplemental air transportation which were formerly Sec. 101(36) and (37) of the Act. The 24 pre-deregulation supplemental carriers now have scheduled service authority.

^d Total Revenue Ton-Miles includes Passenger, Freight, Express and Mail.

^e Civil Aeronautics Board, Handbook of Airline Statistics, 1969 and 1973 (Washington, DC), pp. 69, 71.

f Ibid., Air Carrier Financial Statistics, December 1981 (Washington, DC), pp. 3/28, 44.

g Ibid., pp. 42, 44.

^h U.S. Department of Transportation, Bureau of Transportation Statistics, (pre-1995, U.S. Department of Transportation, Research and Special Programs Administration), Air Carrier Financial Statistics, December Various years (Washington, DC) p. 3.

¹ Ibid., pp. 30, 31, 32, 35.

^j Ibid., pp. 65, 71, 72, 76.

^k U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, http://www.bts.gov/oai/employees/employcov.html.

¹ Ibid., personal communication.

^mCivil Aeronautics Board, Handbook of Airline Statistics, 1973, (Washington, DC), Part III, Tables 2, 4, 7, 13.

ⁿ Ibid., Air Carrier Traffic Statistics, December 1981 (Washington, DC), pp. 2, 5, 46, 84.

^p Ibid., p. 5.

^q Ibid., pp. 52, 53, 59.

^r Civil Aeronautics Board, Air Carrier Traffic Statistics, December 1981 (Washington, DC), pp. 3, 6, 85, 115.

^s U.S. Department of Transportation, Bureau of Transportation Statistics, (pre-1995, U.S. Department of Transportation, Research and Special Programs Administration), Air Carrier Traffic Statistics, December 1991/1990, 1992/1991, 1993/1992, 1994/1993, 1995/1994, 1996/1995, 1997/1996, 1998/1997, 1998/1999 (Washington, DC), p. 3.

^t Ibid., pp. 52, 53, 56, 60.

^u Ibid., pp. 118, 119, 133, 134.

v Ibid., pp. 178, 182, 187.

WU.S. Department of Justice, Immigration and Naturalization Service, Report of Passenger Travel Between the U.S. and Foreign Countries, 1960, 1970 (Washington, DC).

x U.S. Department of Transportation, Research and Special Programs Administration, U.S. International Air Travel Statistics (Washington, DC: Annual issues), tables IIa and IId.

y U.S. Department of Commerce, International Trade Administration, U.S. International Air Passenger Statistics Report, Calendar Year 1995, (Washington, DC), tables IIa, IId.

² National Transportation Safety Board, NTSB Press Release, SB-00-05, 2000, tables 6 through 9, available at http://www.ntsb.gov/aviation/Stats.htm.

^{AA} Ibid., personal communication.

General Aviation Profile

Financial	1960	1970	1980	1990	1995	1996	1997	1998
Expenditures (\$ millions)								
Aircraft	^h 202	^h 339	^h 2,853	^{hR} 3,398	^h 4,260	^h 5,297	^{hR} 7,174	^h 9,571
Operating costs	693	1,696	5,200	^R 6,744	^R 6,324	6,443	^R 6,818	7,105
Total	895	2,035	8,053	R10,142	R10,584	11,740	R13,992	16,676
Inventory								
Number of active aircraft by primary use								
Corporate	N	ⁱ 6,835	ⁱ 14,860	ⁱ 10,100	ⁱ 9,800	ⁱ 9,300	ⁱ 10,411	ⁱ 11,250
Business	N	26,900	49,391	33,100	26,200	28,200	27,716	32,611
Instructional	N	10,727	14,862	18,600	14,800	14,300	14,663	11,375
Personal	N	65,398	96,222	112,600	109,300	109,600	115,630	124,347
Aerial application	N	5,455	7,294	6,200	5,100	5,400	4,858	4,550
Aerial observation	N	N	N	4,900	4,700	3,200	3,311	3,242
External load	N	N	N	N	200	400	186	313
Other work ^a	N	2,054	2,813	1,400	1,100	1,100	579	1,116
Air taxi/air tours ^b	N	N	N	5,800	4,100	3,900	4,948	5,190
Sight seeing ^c	N	N	N	N	900	900	677	679
Other	N	8,249	17,045	4,100	6,300	6,700	5,250	6,010
Public use	N	N	N	N	N	4,200	4,130	4,029
Total	ⁱ 76,549	131,743	211,045	196,800	188,100	191,100	192,400	204,710

KEY: N = data do not exist; R = revised

General Aviation Profile

Performance	1960	1970	1980	1990	1995	1996	1997	1998
Number of flight hours by use (thousands)								
Corporate	N	N	^j 5,332	^j 2,913	^j 2,869	^j 2,718	^j 2,878	^j 3,213
Business	^j 5,699	^j 7,204	8,434	4,417	3,191	3,152	3,006	3,523
Instructional	1,828	6,791	5,748	7,244	4,106	4,425	4,956	3,961
Personal	3,172	6,896	8,894	9,276	9,320	8,893	9,644	9,781
Aerial application	N	N	2,044	1,872	1,557	1,787	1,562	1,306
Aerial observation	N	N	N	1,745	1,385	1,036	1,261	812
External load	N	N	N	N	118	203	112	153
Other work ^a	N	N	1,053	572	268	262	139	286
Air taxi/air tours ^b	N	N	N	2,249	1,527	1,773	2,120	2,583
Sight seeing ^c	N	N	N	N	206	186	127	169
Other	2,422	5,139	4,925	475	1,121	644	819	940
Public use ^d	N	N	N	N	N	1,021	1,096	1,373
Total	13,121	26,030	36,430	30,763	25,667	26,100	27,713	28,100
Vehicle-miles ^e (millions)	^k 1,769	^k 3,207	^k 5,204	^{kR} 4,548	^k 3,795	^k 3,524	^k 3,877	kU
Passenger-miles ^e (millions)	^h 2,300	^h 9,100	^h 14,700	^h 13,000	^{hR} 10,800	^{hR} 12,000	^h 12,500	^h 13,300
Fuel consumed (million gallons)	¹ 242	¹ 759	¹ 1,286	¹ 1,016	^{qR} 847	^{qR} 896	^{qR} 934	^q 1,126
Aviation gasoline	242	551	520	353	^R 287	^R 289	^R 292	311
Jet fuel	N	208	766	663	^R 560	^R 608	^R 642	815

KEY: N = data do not exist; R = revised

General Aviation Profile

Safety	1960	1970	1980	1990	1995	1996	1997	1998
Fatalities ^f								
Corporate	N	^m 28	ⁿ 66	ⁿ 21	ⁿ 15	ⁿ 20	ⁿ 3	p ₀
Business	N	148	126	80	73	44	53	42
Instructional	N	93	73	62	44	40	38	36
Personal	N	726	808	492	488	413	436	424
Aerial application	N	41	32	17	15	10	18	6
Other	N	174	134	95	99	105	122	112
Total	^m 787	1,310	1,239	767	734	632	660	620
Accidents								
Fatal	°429	°641	°618	°443	°412	°360	^{oR} 353	°365
Total	4,793	4,712	3,590	2,215	2,053	^R 1,908	^R 1,853	1,909
Accident rate ⁹ (per 100,000 flight hours)								
Fatal	3.3	2.5	1.7	1.6	1.6	1.5	1.4	1.4
Total	36.5	18.1	9.9	7.8	8.2	7.7	7.3	7.1

^a In 1960, 1970, 1980, classified as "Industrial."

NOTES: Numbers may not add to totals due to rounding. Total fatalities in this profile may not match those in table 3-14, due to when the total fatalities data were received and the data breakdown by type of flying. NTSB constantly updates and reclassifies accident and fatality data.

1995 data for active aircraft by use, and flight hours, have been revised to reflect changes in adjustment for nonresponse bias with 1996 telephone survey factors. 1996 vehicle-miles and fuel consumption data are estimated using new information on nonrespondents and are not comparable to earlier years.

SOURCES: Unless otherwise noted, refer to chapter tables for sources.

KEY: N = data do not exist; R = revised

- ^h Eno Transportation Foundation, Inc., Transportation in America, Annual Issues (Washington, DC), pp. 42, 47.
- United States. Federal Aviation Administration, General Aviation and Air Taxi Activity and Avionics Survey (Washington, DC: 1990-1997 issues), table 1.1.
- Ji Ibid., table 1.4.
- ^k Ibid., table 3.3.
- ¹ Ibid., table 5.1.
- ^m National Transportation Safety Board, RE-50, personal communication.
- ⁿ Ibid., Annual Review of Aircraft Accident Data, U.S. General Aviation, Calendar Year 1998 (Washington, DC: July 2000), charts 27, 39, 40, 41, 42 and 43.
- ° Ibid., NTSB Press Release, SB99-06 (Washington, DC: 2000, and earlier issues).
- ^p Ibid., personal communication, Aug. 29, 2000.
- ^q 1998: U.S. Department of Transportation, Federal Aviation Administration, FAA Aerospace Forecasts, Fiscal Years 2000-2011 (Washington, DC: March 2000), table 29.

^b Includes air tours done under 14 CFR 135: air taxi operators and commercial operators.

^c Includes sight seeing done under 14 CFR 91: general operating and flight rules.

^d Federal, state or local Government-owned or leased aircraft used for the purpose of fulfilling a government position.

^e Includes air taxi operations. Nautical miles in source multiplied by 1.151 to convert from nautical miles.

f Sum of fatalities does not necessarily equal total. Differences are due to methodology used to count collisions involving aircraft in different categories.

g Suicide/sabotage cases are included in accidents and fatalities data but are excluded from accident rates.

Appendix A Modal Profiles ◀ 331

Highway Profile

Financial	1960	1970	1980	1990	1995	1996	1997	^R 1998
Government receipts (\$ millions)								
Total federal	2,771	6,160	9,949	14,576	19,851	^R 23,196	^R 21,648	24,509
Highway trust fund ^a	ⁱ 2,531	ⁱ 5,464	7,615 ⁱ	ⁱ 13,380	^j 18,835	^{jR} 22,036	^j 20,500	^j 23,396
Other	240	696	2,334	1,196	1,016	^R 1,160	^R 1,148	1,113
State and local total								
State and D.C.	6,055	11,737	19,666	40,026	50,064	^R 52,808	^R 58,087	58,806
Local	2,367	3,866	10,219	20,842	26,432	R26,767	R27,686	28,266
Total	11,193	21,763	39,834	75,444	96,347	R102,771	R107,421	111,581
Government expenditures (\$ millions)								
Total federal	197	425	874	664	1,402	^R 1,598	^R 1,315	1,355
Highway trust fund ^a	27	83	315	358	1,092	^R 1,384	R1,103	1,156
Other ^b	170	342	559	306	310	^R 214	212	199
State and local total								
State and D.C.	7,125	14,100	25,936	45,609	56,981	59,709	61,534	65,507
Local	3,435	6,304	14,953	29,135	35,095	R36775	R39,104	41,093
Total	10,757	20,829	41,763	75,408	93,478	^R 98,082	R101,953	107,955
State highway user tax revenues ^c (\$ millions)								
Motor fuel tax	^k 3,374	^k 6,433	9,485 ^k	^k 19,658	^k 26,881	^l 27,555	¹ 28,477	¹ 29,803
Other motor fuel receipts d	22	44	92	220	108	63	55	58
Motor vehicle registration fees	^m 1,514	^m 2,873	5,173 ^m	^m 10,257	^m 11,942	ⁿ 13,234	ⁿ 13,631	ⁿ 14,552
Other motor vehicle fees e	235	577	1,490	3,353	4,416	4,689	4,704	5,068
Motor carrier taxes ^f	110	176	323	695	770	726	729	861
Miscellaneous fees	68	181	615	1,761	3,307	3,489	3,785	4,165
Total	5,323	10,284	17,177	35,944	47,424	49,756	51,381	54,507

KEY: N = data do not exist; R = revised; U = data are not available



Inventory	1960	1970	1980	1990	1995	1996	1997	^R 1998
Rural/urban mileage by ownership								
Rural mileage								
Under state control	°658,896	° 707,002	^p 750,479	^p 702,486	^p 690,924	^{qR} 691,156	^q 692,767	^q 660,834
Under federal control ^g	111,912	187,696	246,130	178,188	170,568	R168,938	167,369	118,369
Under local control	2,345,317	2,274,714	2,234,327	2,241,608	2,231,029	R2,232,793	2,248,357	2,285,447
County roads	1,742,404	1,732,981	1,542,984	1,616,634	1,626,927	R1,627,639	1,642,468	1,647,025
Town and township roads	538,651	510,174	458,231	437,460	424,529	426,170	426,433	426,340
Other local roads	64,262	31,559	233,112	187,514	179,573	R178,984	179,456	212,082
Total rural mileage	3,116,125	3,169,412	3,230,936	3,122,282	3,092,520	R3,092,887	3,108,493	3,064,650
Urban mileage								
Under state control	50,158	74,103	97,287	95,778	111,766	R111,924	112,226	110,017
Under federal control ^g	N	N	1,495	1,024	1,509	^R 1,470	1,464	1,485
Under local control	N	N	530,119	647,842	706,431	^R 713,371	722,418	730,152
County roads	N	N	71,357	95,929	117,518	R117,181	117,487	117,016
Town and township roads	N	N	37,583	42,752	60,561	60,926	74,402	75,195
Other local roads	379,410	486,567	421,179	509,161	528,352	R535,264	530,529	537,941
Total urban mileage	429,568	560,670	628,901	744,644	819,706	R826,765	836,108	841,654
Total rural and urban mileage	3,545,693	3,730,082	3,859,837	3,866,926	3,912,226	R3,919,652	3,944,601	3,906,304
Rural/urban mileage by functional system								
Rural mileage								
Interstate	N	N	^r 31,905	^{rR} 33,547	^r 32,580	s32,820	^s 32,817	^s 32,803
Other principal arterial	N	N	82,569	83,802	97,948	98,131	98,257	98,852
Minor arterial	N	N	149,057	144,774	137,151	137,359	R137,497	137,308
Major collector	N	N	439,000	436,352	431,712	432,117	432,714	432,408
Minor collector	N	N	299,613	293,922	274,081	273,198	272,362	272,140
Local	N	N	2,228,792	2,129,885	2,119,048	R2,119,262	R2,135,485	2,091,127
Total rural mileage	^t 3,116,125	t3,169,412	3,230,936	3,122,282	3,092,520	R3,092,887	R3,109,132	3,064,649

KEY: N = data do not exist; R = revised; U = data are not available

Highway Profile

Inventory cont'd	1960	1970	1980	1990	1995	1996	1997	^R 1998
Urban mileage								
Interstate	N	N	9,215	11,527	13,164	R13,217	R13,247	13,312
Other freeways and expressways	N	N	6,774	7,668	8,970	^R 9,027	^R 9,063	9,127
Other principal arterial	N	N	44,155	51,968	52,796	^R 52,983	R53,223	53,132
Minor arterial	N	N	66,377	74,659	88,510	^R 89,020	^R 89,195	89,496
Collector	N	N	68,387	78,254	87,331	^R 87,790	R88,049	88,071
Local	N	N	433,993	520,568	568,935	^R 574,728	R583,973	588,504
Total urban mileage	429,568	560,670	628,901	744,644	819,706	^R 826,765	R836,740	841,642
Total rural and urban mileage	3,545,693	3,730,082	3,859,837	3,866,926	3,912,226	R3,919,652	R3,945,872	3,906,290
U.S. roads and streets by surface								
Paved mileage								
Rural	919,082	1,188,080	^t 1,490,050	^t 1,550,283	^t 1,591,334	^{uR} 1,582,166	^u 1,605,804	^u 1,612,251
Urban	311,387	470,341	582,642	704,539	786,934	R798,484	804,131	808,093
Total	1,230,469	1,658,421	2,072,692	2,254,822	2,378,268	R2,380,650	2,409,935	2,420,344
Percent paved Unpaved mileage	34.7%	44.5%	53.7%	58.3%	60.8%	^R 60.5%	^R 60.9%	61.3%
Rural	^t 2,197,043	^t 1,981,332	^t 1,740,886	^t 1,571,999	^t 1,501,186	^{uR} 1,518,310	^u 1,510,330	^u 1,490,488
Urban	118,181	90,329	46,259	40,105	32,772	R35,227	38,019	38,061
Total	2,315,224	2,071,661	1,787,145	1,612,104	1,533,958	R1,553,537	1,548,349	1,528,549
Percent unpaved	65.3%	55.5%	46.3%	41.7%	39.2%	^R 39.5%	R39.1%	38.7%
Number of employees								
State and local govt. streets and highways	^v 532,000	^v 607,000	^v 559,000	^v 569,000	^v 560,000	U	^v 548,000	U
Highway and street construction	U	U	U	^w 238,700	^w 227,900	^w 236,100	wR242,800	^w 256,500

KEY: N = data do not exist; R = revised; U = data are not available



Performance	1960	1970	1980	1990	1995	1996	1997	^R 1998
Vehicle-miles of travel by functional system (millions)								
Rural								
Interstate	[×] 10,514	[×] 79,516	^x 135,084	^x 200,173	^y 223,382	^y 232,565	^{yR} 240,255	^y 251,520
Other principal arterial	N	N	132,958	175,133	215,567	221,403	R228,716	237,704
Minor arterial	N	N	129,816	155,733	153,028	157,444	R163,342	165,780
Major collector	N	N	150,186	190,512	186,212	190,923	R201,790	203,580
Minor collector	N	N	39,282	49,948	49,936	50,107	^R 52,574	54,278
Local	N	N	84,704	97,379	105,164	R107,752	R114,673	120,595
Total Rural	400,463	539,472	672,030	868,878	933,289	^R 960,194	R1,001,350	1,033,457
Urban								
Interstate	13,365	81,532	161,242	278,901	341,515	351,579	R361,401	374,622
Other freeways and expressways	N	N	79,690	127,465	151,509	157,502	R159,622	166,626
Other principal arterial	N	N	229,469	335,543	370,365	377,776	R385,125	388,073
Minor arterial	N	N	175,030	236,225	293,228	299,345	R301,912	309,295
Collector	N	N	83,043	106,297	126,883	129,310	R130,143	131,919
Local	N	N	126,791	191,053	205,907	208,374	R222,142	228,530
Total urban	318,299	570,252	855,265	1,275,484	1,489,407	1,523,886	R1,560,345	1,598,065
Total rural and urban	718,762	1,109,724	1,527,295	2,144,362	2,422,696	R2,484,080	R2,561,695	2,631,522
Highway demand for petroleum (thousand barrels)								
Motor fuel	^z 1,378,095	^z 2,198,310	^z 2,737,143	^z 3,113,214	^{AA} 3,424,616	^{AAR} 3,492,285	AAR3,580,620	^{AA} 3,687,704
Asphalt and road oil	BB 110,000	^{BB} 163,000	^{BB} 145,000	^{CC} 176,340	^{CC} 177,543	^{CCR} 177,206	^{CC} 184,383	^{CC} 190,258
Total	1,488,095	2,361,310	2,882,143	3,289,554	3,602,159	R3,669,491	R3,765,003	3,877,962
Safety								
Fatalities	^{DD} 36,399	^{DD} 52,627	^{DD} 51,091	^{DD} 44,599	^{DD} 41,817	^{DD} 42,065	DDR42,013	^{DD} 41,501
Injured persons	N	N	N	3,231,000	3,465,000	R3,483,000	3,348,000	3,192,000
Crashes	N	N	N	6,471,000	6,699,000	6,770,000	6,624,000	6,335,000

KEY: N = data do not exist; R = revised; U = data are not available

Highway Profile

- ^a The Federal Highway Trust Fund was created with the enactment of the Highway Revenue Act of 1956. The total receipts shown for 1995 are overstated by approximately \$1.59 billion due to a fiscal year(FY) 1994 error by the Treasury Department in reconciling estimated deposits to the actual tax revenue. The correction was made after the close of FY1994 and is shown in FY1995 receipts.
- ^b Figures obtained by addition/subtraction and may not appear directly in data source.
- ^c Revenues not necessarily allocated to highway expenditures.
- ^d Includes distributors and dealers licenses, inspection fees, fines and penalties, and miscellaneous receipts.
- ^e Includes drivers licenses, title fees, special title taxes, fines and penalties, estimated service charges, and local collections.
- f Includes carrier gross receipt taxes; mileage, ton-mile and passenger-mile taxes; special license fees and franchise taxes; and certificate or permit fees.
- ^g Mileage in Federal parks, forests, and reservations that are not a part of the state and local highway system.
- ^h Highway category classifications changed several times before 1980. Actual 1960 data categories were: main Rural Roads, local Rural Roads and Urban Streets; 1970 data categories were: Rural Interstate, Rural Other Arterial, Other Rural, Urban Interstate and Other Urban.

NOTES: Motor vehicle injury and crash data in this profile come from the National Highway Traffic Safety Administration's General Estimates System (GES). The data from GES, which began operation in 1988, are obtained from a nationally representative probability sample selected from all police-reported crashes, and the GES sample includes only crashes where a police accident report was completed and the crash resulted in property damage, injury, or death. The resulting figures do not take into account crashes which were not reported to the police or which did not result in at least property damage.

Earlier editions of NTS, particularly the 1993 Historical Compendium, used crash and injury figures estimated by the National Safety Council, which employed a different set of methods to arrive at its figures. Thus, the injury and crash figures in this edition of NTS may not be comparable with those found in earlier editions.

In 1998, FHWA instituted a new method of creating mileage based tables derived from the Highway Peformance Monitoring System (HPMS). See Chapter 1 accuracy profiles for more information about the HPMS.

SOURCES: Unless otherwise noted, please refer to chapter tables for sources.

ⁱ U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics, Summary to 1995*, FHWA-PL-97-009 (Washington, DC: July 1997), table HF-210.

- ¹ Ibid., Highway Statistics (Washington, DC: 1996, 1997, 1998), tables HF-10A and HF-10.
- ^k Ibid., *Highway Statistics, Summary to 1995*, FHWA-PL-97-009 (Washington, DC: July 1997), table MF-201A.
- ¹ Ibid., Highway Statistics (Washington, DC: 1996, 1997, 1998), table MF-1.
- ^mIbid., Highway Statistics, Summary to 1995, FHWA-PL-97-009 (Washington, DC: July 1997), table MV-202.
- ⁿ Ibid., Highway Statistics (Washington, DC:1996, 1997, 1998) table MV-2.
- O Ibid., Highway Statistics, Summary to 1985, FHWA-PL-97-009 (Washington, DC: July 1997), table M-203.
- ^p Ibid., Table HM-210.
- ^q Ibid., Highway Statistics (Washington, DC: 1996, 1997, 1998), table HM-10.
- ^r Ibid., Table HM-220.
- ^s Ibid., Highway Statistics (Washington, DC: 1996, 1997, 1998), table HM-20.
- ^t Ibid., Highway Statistics, Summary to 1995, FHWA-PL-97-009 (Washington, DC: July 1997), table HM-212.
- ^u Ibid., Table HM-12.
- VU.S. Department of Commerce, Statistical Abstract of the United States, various years, State and Local Government Section.
- ^w Ibid., Internet site http://stats.bls.gov/sahome.html, as of Aug. 16, 2000.
- x U.S. Department of Transportation, Federal Highway Administration, Highway Statistics, Summary to 1985 (Washington, DC: April 1987), table VM-201.
- ^y Ibid., *Highway Statistics* (Washington, DC: Various years), table VM-2, VM-2A.
- ² Ibid., *Highway Statistics, Summary to 1995*, FHWA-PL-97-009 (Washington, DC: July 1997), table VM-201A (total fuel consumed in thousands of gallons divided by 42).
- AA Ibid., *Highway Statistics* (Washington, DC: Annual issues), table VM-1(total fuel consumed in thousands of gallons divided by 42).
- BB U.S. Department of Energy, Energy Information Administration, State Energy Data Report, 1960-1980 (Washington, DC), p. 13.
- ^{CC} Ibid., Petroleum Supply Annual (Washington, DC: Annual issues), table 2.
- ^{DD}U.S. Department of Transportation, National Highway Traffic Safety Administration, National Center for Statistics and Analysis, NRD-30, personal communication.

Automobile Profile

Financial	1960	1970	1980	1990	1995	^R 1996	^R 1997	^R 1998
Personal auto expenditures (\$ millions)								
New and used cars ^a	^g 16,571	⁹ 26,754	⁹ 57,243	^{g,R} 119,000	^{g,R} 132,200	^{g,R} 133,300	^{g,R} 135,600	^g 143,100
Tires, tubes, accessories, and parts	2,487	6,087	17,926	R _{29,900}	R36,900	R38,700	R39,600	41,700
Gasoline and oil	12,004	21,921	86,689	R _{107,300}	R113,300	R _{124,200}	R _{128,100}	115,200
Tolls	310	652	1,104	^R 2,300	R3,400	R3,700	^R 4,000	4,200
Insurance premiums less claims paid	2,029	3,752	9,443	^R 18,100	R _{29,700}	R31,800	R36,300	38,000
Repair, greasing, washing, parking,				_	_	_	_	
storage, rental, and leasing	5,519	12,329	34,022	^R 84,900	R122,200	R134,200	R146,300	153,100
Auto registration fees	^h 867	^h 1,668	^h 2,893	^h 6,054	^h 7,043	ⁱ 7,698	ⁱ 8,163	¹ 8,630
Driver's license fees	119	222	370	638	823	893	865	917
Total ^a	39,906	^R 73,385	209,690	R368,192	R445,567	^R 474,491	R498,928	504,847
Taxi expenditures (\$ millions)	⁹ 609	^g 1,180	^g 1,866	^{g,R} 2,600	^g 3,200	^g 3,500	^{g,R} 3,700	⁹ 4,100
Inventory								
Number of vehicle registrations								
Passenger car and motorcycle	^j 62,245,422	^j 92,067,655	^j 127,294,783	^j 137,959,958	^k 132,283,966	^{k,R} 133,599,940	^k 133,575,077	135,717,988
Other 2-axle 4-tire vehicle	е	14,210,591	27,875,934	48,274,555	65,738,322	R69,133,913	70,224,082	71,330,205
Motorcycle	574,032	2,824,098	5,693,940	4,259,462	3,897,191	R3,871,599	3,826,373	3,879,450
Motor vehicle licensed drivers	87,252,563	111,542,787	¹ 145,295,036	¹ 167,015,250	176,628,482	179,539,340	182,709,204	184,980,177
Number of employees								
Taxicabs ^m	120,700	106,400	52,500	32,400	30,700	30,500	30,600	31,200
Automotive dealers and service stations	1,267,200	1,617,400	1,688,500	2,063,100	2,189,600	2,266,700	R2,310,800	2,332,300
Motor vehicles, parts, and supplies	N	N	434,300	456,000	492,100	502,800	^R 513,000	516,600
Auto repair, services, and parking	N	N	570,900	913,700	1,020,100	1,080,000	^R 1,119,600	1,145,200
Performance								
Vehicle-miles (millions)								
Passenger car and motorcycle								
Rural highway								
Rural interstate	N	ⁿ 62,342	ⁿ 89,488	ⁿ 117,519	^k 115,991	k,R120,323	k,R121,095	128,447
Rural other arterial	ⁿ 233,452	182,213	180,857	211,066	212,063	R217,559	R221,732	230,435
Other rural roads	80,171	179,533	180,314	219,325	199,878	R203,147	R212,400	220,376
All rural	313,623	361,746	361,171	430,391	527,932	^R 541,029	^R 555,227	579,258
Urban highway ^b								
Urban interstate	N	69,369	124,480	184,783	205,489	R211,817	R215,525	222,066
Other urban	N	426,222	546,671	685,129	714,670	726,928	^R 741,885	758,536
All urban	273,389	495,591	671,151	869,912	920,159	R938,745	^R 957,410	980,602
Total rural and urban highway	587,012	857,337	1,032,322	1,300,303	1,448,091	R1,479,744	R1,512,637	1,559,860

KEY: N = data do not exist; R = revised

Automobile Profile

Performance cont'd	1960	1970	1980	1990	1995	^R 1996	^R 1997	R ₁₉₉₈
Vehicle-miles (millions) cont'd								
Other 2-axle 4-tire vehicle								
Rural highway								
Rural interstate	е	6,766	19,952	46,298	63,329	65,779	^R 69,030	72,345
Rural other arterial	е	29,808	56,137	87,474	118,305	R122,212	R129,890	132,043
Other rural roads	е	37,017	73,471	94,059	113,838	^R 119504	R128,396	130,420
All rural	е	73,591	149,560	227,831	295,472	R307495	R327,316	334,806
Urban highway ^c								
Urban interstate	е	6,252	23,067	71,500	109,807	112,908	R116,680	121,700
Other urban	е	43,443	118,308	275,239	384,750	^R 396,137	R406,743	411,769
All urban	е	49,695	141,375	346,739	494,557	^R 509,045	R523,423	533,469
Total rural and urban highway	е	123,286	290,935	574,570	790,029	^R 816540	R850,739	868,275
Vehicle-miles (millions)								
Passenger car and motorcycle	^j 587,012	^j 919,679	^j 1,121,810	^j 1,417,823	1,448,091	R1,479,774	R1,512,637	1,559,860
Other 2-axle 4-tire vehicle	е	123,286	290,935	574,571	790,029	^R 816,540	R850,739	868,275
Motorcycle	f	2,979	10,214	9,574	9,797	^R 9,920	^R 10,081	10,283
Total	587,012	1,042,965	R _{1,412,745}	1,992,394	R3,280,932	R2,296,314	R2,363,376	2,428,135
Passenger-miles ^c (millions)								
Passenger car and motorcycle	^a 1,145,000	^a 1,754,175	a2,024,246	2,293,815	R2,282,870	R2,348,774	R2,400,960	2,475,961
Other 2-axle 4-tire vehicle	е	225,613	520,774	999,754	1,295,648	R _{1,339,126}	R _{1,395,212}	1,423,971
Motorcycle	f	3,277	12,257	12,424	11,560	11,706	11,896	12,134
Total	1,145,000	1,979,787	2,545,020	3,293,569	R3,578,518	R3,687,900	R3,796,172	3,899,932
Average miles traveled per vehicle								
Passenger car and motorcycle	^R 9,431	9,989	8,813	10,277	10,947	^R 13,892	R14,216	14,404
Other 2-axle 4-tire vehicle	е	8,676	10,437	11,902	12,018	^R 11,811	^R 12,115	12,173
Motorcycle	f	1,055	1,794	2,244	2,514	^R 2,562	^R 2,635	2,651
Fuel consumed (million gallons)								
Passenger car and motorcycle	41,171	67,879	70,186	69,759	68,268	^R 69,095	^R 70,094	71,904
Other 2-axle 4-tire vehicle	е	12,313	23,796	35,611	45,605	^R 47,133	^R 49,387	50,462
Motorcycle	f	60	204	191	196	198	202	205
Average fuel consumption per vehicle (gallons)								
Passenger car and motorcycle	668	737	551	506	516	^R 585	591	597
Other 2-axle 4-tire vehicle	е	866	854	738	694	^R 685	703	707
Motorcycle	f	21	36	45	50	^R 51	53	53

KEY: N = data do not exist; R = revised

Automobile Profile

Performance cont'd	1960	1970	1980	1990	1995	^R 1996	^R 1997	^R 1998
Vehicle-miles (millions) cont'd								
Average miles traveled per gallon of fuel consumed								
Passenger car	14.3	13.5	16.0	20.3	21.2	^R 21.4	21.6	21.5
Other 2-axle 4-tire vehicle	е	10.0	12.2	16.1	17.3	^R 17.2	17.2	17.1
Motorcycle	f	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Safety								
Number of occupants and nonoccupant fatalities								
Passenger car	N	N	°27,449	°24,092	°22,423	°22,505	°22,199	21,194
Motorcycle	790	2,280	5,144	3,244	2,227	2,161	2,116	2,294
Bicycle ^d	490	760	965	859	833	765	814	760
Pedestrian ^d	7,210	8,950	8,070	6,482	5,584	5,449	5,321	5,228
Occupant fatality rates								
Per 100 million vehicle-miles								
Passenger car	4.7	3.8	2.5	1.7	1.5	1.5	^R 1.5	1.4
Motorcycle	N	76.5	50.4	33.9	22.7	21.8	^R 21.0	22.3
Per 10,000 registered vehicles								
Passenger car	5.1	3.9	2.6	^R 1.8	^R 1.7	^R 1.7	^R 1.8	1.7
Motorcycle	^R 13.8	8.1	9.0	7.6	5.7	5.6	5.5	5.9
Vehicle involvement rate (fatal crashes)								
Per 100 million vehicle-miles								
Passenger car	N	5.6	3.5	2.4	2.1	2.0	2.0	1.9
Motorcycle	N	22.9	50.9	34.3	23.1	21.9	21.4	22.7
Per 10,000 registered vehicles								
Passenger car	N	5.6	3.7	2.8	2.5	2.5	2.4	2.3
Motorcycle	N	8.2	9.1	7.7	5.8	5.6	5.6	6.0

KEY: N = data do not exist; R = revised

Appendix A Modal Profiles

Automobile Profile

NOTES:

- ^a Figures obtained by addition/subtraction and may not appear directly in data source.
- ^b Urban consists of travel on all roads and streets in urban places of 5,000 or greater population.
- ^c In July 1997, the USDOT, Federal Highway Administration published revised passengermiles data for the highway modes for many years. The major change reflected the reas signment of some vehicles from the passenger car category to the other 2-axle 4-tire vehicle category.
- ^d Involvement only with motor vehicle.
- ^e Included in single-unit 2-axle 6-tire or more truck category.
- f Included in passenger car and motorcycle.

SOURCES: Unless otherwise noted, refer to chapter tables for sources.

- g U.S. Department of Commerce, Bureau of Economic Analysis, "Annual Only" NIPA Table 2.4 available at http://www.bea.doc.gov/bea/dn1.htm as of Aug 17, 2000
- ^h U.S. Department of Transportation, Federal Highway Administration (FHWA), Highway Statistics, Summary to 1995, FHWA-97-009 (Washington, DC: July 1997), table MV-202.

- ⁱ Ibid., Highway Statistics (Washington, DC: Annual issues), table MV-2.
- ^j Ibid., *Highway Statistics*, Summary to 1995, FHWA-97-009 Washigton, DC: July 1997), table VM–201A.
- ^k Ibid., Highway Statistics (Washington, DC: Annual issues), table VM-1.
- ¹ Ibid., Highway Statistics (Washington, DC: Annual issues), table DL-22.
- ^mIbid., internet site http://stats.bls.gov/sahome.html, as of Aug. 17, 2000, codes "414120 Taxicabs", "605500 Automotive Dealers and Service Stations", "525010 Motor Vehicle Parts, and Supplies" and "807500 Auto Repair, Services and Parking."
- ⁿ U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics, Summary to 1995*, FHWA-PL-97-009 (Washington, DC: July 1997), table VM-201.
- Ou.S. Department of Transportation, National Highway Traffic Safety Administration (NHTSA), Traffic Safety Facts 1998 (Washington, DC: October 1998), tables 3, 4, 7, and 10.

Truck Profile

Financial	1960	1970	1980	1990	1995	^R 1996	1997	^R 1998
Operating revenues, total								
(\$ millions)	N	N	N	127,314	161,806	172,743	183,153	197,490
Local trucking	N	N	N	31,397	43,830	46,589	49,972	55,553
Trucking, except local	N	N	N	74,465	91,675	97,586	103,847	109,351
Local trucking with storage	N	N	N	4,115	5,154	5,502	5,860	6,144
Courier services, except by air	N	N	N	17,337	21,147	23,066	23,474	26,442
Operating expenses, total (\$ millions)	N	N	N	118,968	151,628	162,825	170,998	179,908
Local trucking	N	N	N	28,049	38,695	41,325	43,871	47,478
Trucking, except local	N	N	N	70,965	88,061	94,390	98,570	101,584
Local trucking with storage	N	N	N	3,885	4,817	5,121	5,439	5,638
Courier services, except by air	N	N	N	16,069	20,055	21,989	23,118	25,207
Truck highway-user taxes (\$ millions)								
State	1,709	3,429	6,731	12,691	13,844	U	15,750	15,611
Federal	1,121	2,203	3,157	6,665	11,273	U	12,260	13,086
Total ^b	2,830	5,632	9,888	19,356	^R 25,117	U	28,010	28,697
Inventory								
Number of truck registrations								
Single-unit truck	N	3,681,405	4,373,784	4,486,981	5,023,670	R5,266,029	5,293,358	5,734,925
Combination truck	N	905,082	1,416,869	1,708,895	1,695,751	R1,746,586	1,789,968	1,997,345
Total	11,914,249	4,586,487	5,790,653	6,195,876	6,719,421	7,012,615	7,083,326	7,732,270
Number of employees								
Trucking and courier services, except air	N	998,500	1,182,000	1,273,900	1,440,000	R1,482,000	R _{1,514,200}	1,568,800
Truck drivers and deliverymen	1,477,000	1,565,000	1,931,000	2,148,000	2,861,000	2,542,000	R2,602,000	2,601,000
Number of trucking and courier establishments	N	64,756	69,796	90,709	112,887	116,861	121,111	U

KEY: N = data do not exist; R = revised; U = data are not available

Appendix A Modal Profiles ◀ 341

Truck Profile

Performance	1960	1970	1980	1990	1995	^R 1996	1997	^R 1998
Vehicle-miles (millions)								
Rural highway	N.	40.000 n	05 444 ⁿ	25 700 n	40.054 İ	45 704 İ	^R 49,336 ⁱ	40.000
Rural interstate Rural other arterial	N N	10,069 ⁿ 17.625	25,111 ⁿ 24,789	35,789 ⁿ 31,331	43,351 ¹ 37,056	45,721 ⁱ 37,875	49,336 R39,193	49,896 39,724
		11,550	,	22,572	*	37,875 R25,884	39, 193 R26,169	,
Other rural roads	N 84,508 ⁿ	,	18,876	,	25,624	R _{109,480}	R _{114,698}	25,522
All rural roads	64,506	39,244	68,776	89,692	106,031	109,460	114,090	115,142
Urban highway ^c							Roo = 40	
Urban interstate	N	5,634	13,135	22,163	25,639	26,256	R28,549	30,193
Other urban streets	N	17,337	26,580	34,387	46,486	47,235	R48,230	51,045
All urban streets	42,896	22,971	39,715	56,550	72,125	73,491	R76,779	81,238
Total rural and urban highway	127,405	62,215	108,491	146,242	178,156	^R 182,971	^R 191,477	196,380
Passenger-miles ^e (millions)								
Single-unit truck ^d	98,551	27,081	39,813	51,901	62,705	^R 64,072	R66,893	68,021
Combination truck	28,854	35,134	68,678	94,341	115,451	R118,899	R124,584	128,359
All trucks	127,405	62,215	108,491	146,242	178,156	R _{182,971}	R _{191,477}	195,380
Ton-miles, intercity (millions)	285,000 °	412,000 °	555,000 °	735,000 °	921,000 °	972,000 °	^R 996,000 ^o	1,027,000
Fuel consumed (million gallons)								
Single-unit truck	N	3,968 ^h	6,923 ^h	8,357 ^h	9,216 ⁱ	^R 9,409 ⁱ	^R 9,576 ⁱ	6,817 ⁱ
Combination truck	N	7,348	13,037	16,133	19,777	^R 20,192	R20,302	25,158
All trucks	15,882 ^h	11,316	19,960	24,490	28,993	^R 29,601	R29,878	31,975
Average fuel consumption per vehicle (gallons)								
Single-unit truck	N	1,078	1,583	1,862	1,835	^R 1,787	^R 1,809	1,189
Combination truck	N	8,119	9,201	9,441	11,663	^R 11,561	R11,342	12,596
All trucks	1,333	2,467	3,447	3,953	4,315	^R 4,221	^R 4,218	4,135
Average miles traveled per gallon of fuel consumed								
Single-unit truck	N	6.8	5.8	6.2	6.8	6.8	7.0	10.0
Combination truck	N	4.8	5.3	5.8	5.8	5.9	6.1	5.1
All trucks	8.0	5.5	5.4	6.0	^R 6.1	6.2	6.4	6.1

KEY: N = data do not exist; R = revised; U = data are not available



Performance cont'd	1960	1970	1980	1990	1995	^R 1996	1997	^R 1998
Average miles traveled per vehicle								
Single-unit truck	N	7,356	9,103	11,567	12,482	^R 12,167	R _{12,637}	11,861
Combination truck	N	38,819	48,472	55,206	68,083	^R 68,075	^R 69,601	64,265
All trucks	10,693	13,565	18,736	23,603	26,514	R26,092	R27,032	25,397
Average length of haul (domestic freight) (miles)	272 ^p	263 ^p	363 ^p	391 ^p	416 ^p	^R 426 ^p	435	444
Safety								
Occupant fatalities								
Light truck	N	N	7,486 ^q	8,601 ^q	9,568 ^q	9,932 ^q	^R 10,249 ^q	10,705
Large truck	N	N	1,262	705	648	621	R723	742
All trucks	N	N	8,748	9,306	10,216	10,553	^R 10,972	11,447
Occupant fatality rate								
Per 100 million vehicle-miles								
Light truck	N	N	2.5	1.5	1.3	1.3	1.2	1.2
Large truck	N	N	1.2	0.5	0.4	0.3	0.4	0.4
All trucks	N	N	2.2	1.3	1.1	1.1	1.1	1.1
Per 10,000 registered vehicles								
Light truck	N	N	2.5	1.7	1.5	1.5	1.5	1.5
Large truck	N	N	2.2	1.1	1.0	0.9	1.0	1.0
All trucks	N	N	2.4	1.7	1.5	1.5	1.5	1.5
Vehicle involvement rate (fatal crashes)								
Per 100 million vehicle-miles								
Light truck	N	N	4.3	2.8	2.3	2.3	^R 2.3	2.2
Large truck	N	N	5.0	3.3	2.5	2.6	^R 2.6	2.5
All trucks	N	N	4.5	2.9	2.4	2.4	2.3	2.3
Per 10,000 registered vehicles								
Light truck	N	N	4.2	3.1	2.8	2.8	2.8	2.8
Large truck	N	N	9.3	7.7	6.7	6.8	6.9	6.4
All trucks	N	N	5.0	3.6	3.2	3.2	3.3	3.1

KEY: N = data do not exist; R = revised; U = data are not available

Appendix A Modal Profiles

Truck Profile

^a Local trucking (SIC 4212) - Establishments primarily engaged in furnishing trucking or transfer services without storage for freight generally weighing more than 100 pounds. Trucking, except Local (SIC 4213) - Establishments primarily engaged in furnishing "over-the-road" trucking services or trucking services and storage services, including household goods either as common carriers or under special or individual contracts or agreements, for freight generally weighing more than 100 pounds.
Local trucking, without Storage (SIC 4214) - Establishments primarily engaged in furnishing both trucking and storage services, including household goods.
Courier Services, except by Air (SIC 4215) - Establishments primarily engaged in the delivery of individually addressed letters, parcels, and packages (generally under 100 pounds).

NOTE: In 1995, FHWA revised its vehicle type categories. These new categories include passenger car, other 2-axle 4-tire vehicle, single-unit 2-axle 6-tire or more truck, and combination truck. Other 2-axle 4-tire vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the passenger car category. Single-unit 2-axle 6-tire or more trucks are on a single frame with at least 2 axles and 6 tires.

SOURCES: Unless otherwise noted, refer to chapter tables for sources.

- f U.S. Census Bureau, Transportation Annual Survey (Washington, DC: December 1998), table 1.
- g American Trucking Association, American Trucking Trends (Washington, DC: Annual issues).
- ^h U.S. Department of Transportation, Federal Highway Administration, Highway Statistics Summary to 1995, FHWA-PL-97-009 (Washington, DC: July 1997), table VM-201A.
- ¹ Ibid., Highway Statistics (Washington, DC: Annual issues), table VM-1.
- ^j U.S. Department of Labor, Bureau of Labor Statistics, *Employment, Hours and Earnings, United States, 1909-1994* (Washington, DC: September 1994), SIC 421.
- ^k Ibid., Internet site www.bls.gov, as of Apr. 19, 1999.
- ¹ Eno Transportation Foundation, Inc., Transportation in America, 1998 (Washington, DC: 1998), p. 61.
- ^mU.S. Bureau of the Census, *County Business Patterns* (Washington, DC: Annual issues), table 1b (SIC 421).
- ⁿ U.S. Department of Transportation, Federal Highway Administration, Highway Statistics Summary to 1995, FHWA-PL-97-009 (Washington, DC: July 1997), table VM-201.
- ^o Eno Transportation Foundation, Inc., *Transportation in America*, 1998 (Washington, DC: 1998), p. 44.
- ^p Ibid., p. 71.
- ⁹ U.S. Department of Transportation, National Highway Traffic Safety Administration, Traffic Safety Facts 1999, DOT HS 808 983 (Washington, DC: October 1999), tables 3, 8, and 9.

^bNumbers may not equal totals due to rounding.

^cUrban consists of travel on all roads and streets in urban places of 5,000 or greater population.

dIncludes other 2-axle 4-tire vehicle in 1960.

^e Highway passenger-miles are calculated by multiplying vehicle miles of travel as cited by the Federal Highway Administration (FHWA) by the average number of occupants for each vehicle type as estimated by the FHWA using the Nationwide Personal Transportation Survey.

Bus Profile

Financial	1960	1970	1980	1990	1995	1996	1997	^R 1998
Expenditures (\$ thousands)								
School bus	486,000 ^b	1,219,000 ^b	R3,833,000 b	^R 8,031,000 ^b	^R 9,889,000 ^b	^R 10,396,000 ^b	R _{10,353,000} b	10,326,000 ^b
Operating revenues (\$ thousands)								
Intercity bus, class I	463,100 ^c	721,700 ^c	1,397,378 ^c	943,268 ^c	917,298 ^d	911,504 ^d	999,918 ^d	U ^d
Operating expenses (\$ thousands)								
Intercity bus, class I	405,400	639,000	1,318,372	1,026,213	899,176	878,185	947,556	U
Inventory								
Number of operating companies								
Intercity bus, class I	143	71	61	31	28 ^d	27 ^d	U	U ^d
Number of vehicles								
All buses	272,129 ^e	377,562 ^e	528,789 ^e	626,987 ^e	685,503 ^e	694,781 ^e	697,548 ^e	715,540 ^e
Number of employees								
Intercity and rural bus	40,500 ^f	43,400 ^f	37,900 ^f	26,100 ^f	23,800 ^g	23,800 ^g	R22,200 ^g	24,400 ^g
School bus	N	N	79,900	111,200	131,100	132,200	R136,500	141,000
Performance								
Vehicle-miles (millions)								
All buses								
Rural highway								
Interstate rural	N	339 ^h	533 ^h	567 ^h	711 ^h	742 ⁱ	794 ⁱ	834 ⁱ
Other arterial rural	N	944	991	995	1,134	1,201	^R 1,243	1,282
Other rural	N	1,266	1,511	1,882	1,972	2,015	R2,072	2,135
All rural	2,332 ^h	2,549	3,035	3,444	3,817	3,958	^R 4,109	4,251
Urban highway ^a								
Interstate urban	N	277	560	455	580	598	647	663
Other urban	N	1,718	2,464	1,828	1,986	2,007	2,086	2,093
All urban	2,014	1,995	3,024	2,283	2,566	2,605	2,733	2,756
Total rural and urban highway	4,346	4,544	6,059	5,726	6,383	6,563	6,842	7,007

KEY: N = data do not exist; R = revised; U = data are not available

Bus Profile

Performance cont'd	1960	1970	1980	1990	1995	1996	1997	^R 1998
Passenger-miles (millions)								
All buses	N	N	N	121,398	136,104	138,613	R145,060	148,558
Number of revenue passengers (thousands)								
Intercity bus, total	366,000 ^b	401,000 ^b	370,000 ^b	334,000 ^b	366,500 ^b	347,900 ^b	350,600 ^b	357,600 ^b
Average miles traveled per vehicle								
All buses	15,970 ¹	12,035 ¹	11,458 ¹	9,133 ¹	9,365 ⁱ	9,446 ⁱ	^R 9,809 ⁱ	9,793 ⁱ
Fuel consumed (million gallons)								
All buses	827	820	1,018	895	968	990	^R 1,027	1,040
Average fuel consumption per vehicle (gallons)								
All buses	3,039	2,172	1,925	1,427	1,412	^R 1425	^R 1,472	1,454
Average miles traveled per gallon of fuel consumed								
All buses	5.3	5.5	6.0	6.4	6.6	^R 6.6	^R 6.7	6.7
Average revenue per passenger-mile (cents) (intercity)	2.71 ^b	3.60 ^b	7.26 ^b	11.55 ^b	12.19 ^b	12.30 ^b	^R 12.45 ^b	12.48 ^b
Safety								
Number of fatalities								
School bus-related	N	N	150 ^k	115 ^k	123 ^k	136 ^k	131 ^k	128 ^k
School bus								
Occupants	N	N	9	11	13	10	8	6
Other vehicle								
Occupants	N	N	88	64	72	101	99	91
Nonoccupants	N	N	53	40	38	25	24	31
Occupant fatalities								
All buses	N	N	46	32	^R 33	^R 21	18	38
School buses	N	N	14	13	^R 12	^R 10	8	6
Cross country buses	N	N	23	2	6	3	^R 5	13
Transit buses	N	N	6	3	R ₁	5	3	2
Other and unknown	N	N	3	14	14	3	R ₂	17

KEY: N = data do not exist; R = revised; U = data are not available



Safety cont'd	1960	1970	1980	1990	1995	1996	1997	^R 1998
Fatalities in vehicular accidents								
All buses	N	N	390	340	340	297	343	334
Occupant fatality rate								
Per 100 million vehicle-miles								
All buses	N	N	0.8	0.6	0.5	0.3	^R 0.3	0.5
Per 10,000 registered vehicles								
All buses	N	N	0.9	0.5	0.5	^R 0.3	^R 0.3	0.5
Vehicle involvement rate								
Per 100 million vehicle-miles								
All buses	N	N	6.4	5.9	5.3	4.5	4.4	4.2
Per 10,000 registered vehicles								
All buses	N	N	7.4	5.4	5.0	4.3	4.3	4.1

NOTE: See transit profile for transit bus data.

KEY: N = data do not exist; R = revised; U = data are not available

^a Urban consists of travel on all roads and streets in urban places of 5,000 or greater population. **SOURCES:** Unless otherwise noted, refer to chapter tables for sources.

^b Eno Transportation Foundation, Inc., Transportation In America, 1999 (Washington, DC: 2000), p. 42, 48, 50.

^c Interstate Commerce Commission, Annual Report of the ICC (Washington, DC: Annual issues), Appendix F, tables 1, 6.

^d U.S. Department of Transportation, Bureau of Transportation Statistics, Selected Earnings Data, Class I Motor Carriers of Passengers (Washington, DC: Annual issues).

^e U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics* (Washington, DC: Annual issues), table MV-10.

f U.S. Department of Labor, Bureau of Labor Statistics, Employment, Hours and Earnings, United States, 1909-1994 (Washington, DC: September 1994), SIC codes 413, 415.

^g Ibid., Internet site www.bls.gov, as of August 18, 2000.

^h U.S. Department of Transportation, Federal Highway Administration, *Highway* Statistics, Summary to 1985 (Washington, DC: July 1997), table VM-201.

¹ Ibid., Highway Statistics (Washington, DC: Annual issues), table VM-1.

^j Ibid., Highway Statistics, Summary to 1995, FHWA-PL-97-009 (Washington, DC: July 1997), table VM-201A.

^k Ibid., National Highway Traffic Safety Administration, Traffic Safety Facts 1998, DOT HS 808 983 (Washington, DC: October 1999), Tables 74, 93.

Financial	1960	1970	1980	1990	1995	1996	1997	1998 ^P
Passenger operating revenues (\$ millions)								
Passenger fares	1,335	1,639 ^l	2,556 ^l	^R 5,891 ^I	6,801 ^l	7,416 ^l	^R 7,546	7,717
Motor bus	N	N	N	2,967	3,287	3,515	^R 3,558	3,703
Heavy rail	N	N	N	1,741	2,018	2,322	2,351	2,297
Light rail	N	N	N	83	127	144	139	150
Trolley bus	N	N	N	46	54	55	57	55
Demand responsive	N	N	N	41	146	157	^R 170	153
Ferry boat ^a	N	N	N	56	60	54	^R 51	69
Commuter rail	N	N	N	952	1,078	1,146	1,178	1,255
Other ^b	N	N	N	26	46	24	R42	35
Other operating revenue	72 ^x	68 [×]	248 ^x	895 ^x	2,812 ^x	^R 2,928 ^x	^R 3,308 ^x	2,875 ^x
Total operating revenues	1,407	1,707	2,805	6,786	9,613	^R 10,345	^R 10,854	10,592
Operating assistance ^c								
State and local	N	N	2,611	8,297	7,811	8,210	^R 8,014	7,579
Federal	N	N	1,093	970	817	^R 596	^R 647	727
Total operating assistance	N	N	3,705	9,267	8,628	8,807	^R 8,661	8,305
Total revenues	1,407	1,707	6,510	16,053	18,241	19,151	^R 19,515	18,897
Operating expenses (\$ millions)								
Motor bus	N	N	N	8,903 ^j	10,321 ^j	10,575 ^j	^R 10,944 ^j	11,048 ^j
Heavy rail	N	N	N	3,825	3,523	3,402	3,474	3,530
Light rail	N	N	N	237	376	442	R473	503
Trolley bus	N	N	N	109	139	135	140	147
Demand responsive	N	N	N	518	1,000	1,187	^R 1,285	1,273
Ferry boat ^a	N	N	N	171	210	183	^R 221	267
Commuter rail	N	N	N	1,939	2,211	2,294	R2,278	2,365
Other ^b	N	N	N	41	67	124	^R 122	117
Total operating expenses ^d	N	N	6,247	15,742	17,849	18,341	^R 18,936	19,249

KEY: ~ = included in heavy rail figure; + = included in motor bus figure;
 N = data do not exist; NA = not applicable;
 P = preliminary; R = revised

Financial cont'd	1960	1970	1980	1990	1995	1996	1997	1998 ^P
Depreciation and amortization	N	N	278 ^k	1,593 ^k	2,601 ^k	2,885 ^k	^R 3,106 ^k	3,349 k
Other reconciling items	N	N	186	644	1,091	1,034	^R 1,117	1,116
Total expenses	1,377	1,996	6,711	17,979	21,540	22,260	^R 23,159	23,715
Average passenger revenue per passenger-mile (\$)								
Motor bus	N	N	N	0.14 ^{il}	0.17 ^{il}	0.18 ^{il}	0.18 ^{il}	0.18 ^{il}
Heavy rail	N	N	N	0.15	0.19	0.20	0.20	0.19
Light rail	N	N	N	0.15	0.15	0.15	0.13	0.13
Trolley bus	N	N	N	0.24	0.29	0.30	0.30	0.30
Demand responsive	N	N	N	0.10	0.29	0.24	^R 0.23	0.15
Ferry boat ^a	N	N	N	0.20	0.23	0.21	^R 0.17	0.20
Commuter rail	N	N	N	0.14	0.13	0.14	0.15	0.14
Other ^b	N	N	N	0.21	0.17	0.07	^R 0.11	0.09
All modes	N	N	N	0.14	^R 0.17	0.18	0.18	0.17
Average passenger fare (\$)								
Motor bus	N	N	N	0.52 ^m	0.66 ^m	0.70 ^m	0.70 ^m	0.69 ^m
Heavy rail	N	N	N	0.74	0.99	1.08	0.97	0.96
Light rail	N	N	N	0.47	0.50	0.55	0.53	0.55
Trolley bus	N	N	N	0.36	0.45	0.47	0.47	0.47
Demand responsive	N	N	N	0.60	2.26	2.21	1.83	1.60
Ferry boat ^a	N	N	N	1.11	1.31	1.12	^R 0.99	1.32
Commuter rail	N	N	N	2.90	3.13	3.24	3.30	3.28
Other ^b	N	N	N	0.90	1.57	1.33	0.66	0.62
All modes	0	0	0	0.67	0.87	0.93	0.89	0.87

KEY: ~ = included in heavy rail figure; + = included in motor bus figure;
 N = data do not exist; NA = not applicable;
 P = preliminary; R = revised

Inventory	1960	1970	1980	1990	1995	1996	1997	1998 ^P
Number of systems								
Motor bus	1,236 ⁿ	1,075 ⁿ	1,022 ⁿ	2,685 ⁿ	2,250 ⁿ	2,250 ⁿ	2,250 ⁿ	2,262 ⁿ
Heavy rail	31	15	11	12	14	14	14	14
Light rail	~	~	9	17	22	22	22	23
Trolley bus	19	6	5	5	5	5	5	5
Demand responsive	N	N	N	3,193	5,214	5,214	5,214	5,254
Ferry boat ^a	N	N	16	27	25	25	25	28
Commuter rail	N	N	18	14	16	16	18	18
Other ^b	N	N	5	35	69	69	70	72
Total ^e	1,286	1,096	1,055	5,078	5,973	5,973	5,975	6,000
Number of vehicles								
Motor bus	49,600 °	49,700 °	59,411 °	58,714 °	67,107 °	71,678 °	^R 72,770 °	74,641 ^o
Heavy rail	9,010	9,286	9,641	10,419	10,157	10,201	10,242	10,301
Light rail	2,856	1,262	1,013	913	999	1,140	1,229	1,205
Trolley bus	3,826	1,050	823	832	885	871	859	880
Demand responsive	N	N	N	16,471	29,352	30,804	R32,509	32,899
Ferry boat ^a	N	N	N	108	110	109	^R 134	124
Commuter rail	N	N	4,500	4,415	4,565	4,665	4,943	4,907
Other ^b	N	N	N	1,089	2,699	2,894	^R 3,674	4,013
Total	65,292	61,298	75,388	92,961	115,874	122,362	R126,360	128,970
Number of employees ^f								
Motor bus	121,300 ^p	101,598 ^p	N	162,189 ^p	181,973 ^p	190,152 ^p	^R 196,861	193,542
Heavy rail	35,100	36,442	N	46,102	^R 45,644	45,793	45,935	45,155
Light rail	+	+	N	4,066	4,935	5,728	^R 5,940	6,048
Trolley bus	+	+	N	1,925	1,871	2,084	2,037	2,047
Demand responsive	N	N	N	22,740	39,882	44,667	R44,029	47,509
Ferry boat ^a	N	N	N	2,813	2,697	2,830	^R 3,166	3,433
Commuter rail	N	N	N	21,443	22,320	22,604	^R 21,651	22,399
Other ^b	N	N	N	898	1,169	1,086	^R 1,140	1,246
Total	156,400	138,040	189,300	262,176	300,491	314,944	R320,759	321,379

KEY: ~ = included in heavy rail figure; + = included in motor bus figure; N = data do not exist; NA = not applicable; P = preliminary; R = revised

Performance	1960	1970	1980	1990	1995	1996	1997	1998 ^P
Vehicle-miles (millions)								
Motor bus	1,576 ^q	1,409 ^q	1,677 ^q	2,130 ^q	2,184 ^q	2,221 ^q	^R 2,245 ^q	2,291 ^q
Heavy rail	391	407	385	537	537	543	558	566
Light rail	75	34	18	24	35	38	41	43
Trolley bus	101	33	13	14	14	14	14	14
Demand responsive	N	N	N	306	507	548	^R 585	698
Ferry boat ^a	N	N	2	2	3	3	R ₃	2
Commuter rail	N	N	179	213	238	242	251	265
Other ^b	N	N	13	16	33	43	^R 50	53
Total	2,143	1,883	2,287	3,242	3,550	3,650	^R 3,746	3,932
Unlinked passenger trips (millions)								
Motor bus	N	5,034 ^r	5,837 ^r	5,677 ^r	4,848 ^r	4,887 ^r	^R 5,013 ^r	5,387 ^r
Heavy rail	N	1,881	2,108	2,346	2,033	2,157	2,430	2,393
Light rail	N	124	133	175	251	261	^R 262	275
Trolley bus	N	182	142	126	119	117	121	117
Demand responsive	N	N	-	68	88	93	^R 99	95
Ferry boat ^a	N	N	63	50	47	48	^R 51	52
Commuter rail	N	N	280	328	344	352	357	382
Other ^b	N	N	4	29	33	33	^R 41	45
Total	N	7,332	8,567	8,799	7,763	7,948	^R 8,374	8,746
Passenger-miles (millions)								
Motor bus	N	N	21,790 ^y	20,981 ^y	18,818 ^y	19,096 ^y	^R 19,604 ^y	20,602 ^y
Heavy rail	N	N	10,558	11,475	10,559	11,530	12,056	12,284
Light rail	N	N	381	571	860	957	^R 1,035	1,118
Trolley bus	N	N	219	193	187	184	189	182
Demand responsive	N	N	N	431	607	656	R 754	1,012
Ferry boat ^a	N	N	С	286	260	256	^R 294	345
Commuter rail	N	N	6,516	7,082	8,244	8,351	8,038	8,716
Other ^b	N	N	390	124	273	348	^R 369	397
Total	N	N	39,854	41,143	39,808	41,378	R42,339	44,656

KEY: ~ = included in heavy rail figure; + = included in motor bus figure; N = data do not exist; NA = not applicable; P = preliminary; R = revised

Performance cont'd	1960	1970	1980	1990	1995	1996	1997	1998 ^P
Average trip length (miles)								
Motor bus	N	N	N	N	4 ^s	4 ^s	4 ^s	4 ^s
Heavy rail	N	N	N	N	5	5	5	5
Light rail	N	N	N	N	3	4	4	4
Trolley bus	N	N	N	N	2	2	2	2
Demand responsive	N	N	N	N	8	9	10	11
Ferry boat ^a	N	N	N	N	6	5	R ₆	6
Commuter rail	N	N	N	N	24	24	23	23
Vanpool	N	N	N	N	35	34	33	36
Other ^b	N	N	N	N	1	1	1	1
All modes	N	N	N	N	5	5	5	5
Average speed (miles per hour)								
Motor bus	N	N	N	N	13 ^t	13 ^t	13 ^t	13 ^t
Heavy rail	N	N	N	N	21	21	21	21
Light rail	N	N	N	N	14	14	16	16
Trolley bus	N	N	N	N	8	8	8	8
Demand responsive	N	N	N	N	15	15	15	17
Ferry boat ^a	N	N	N	N	6	7	^R 7	8
Commuter rail	N	N	N	N	34	33	34	32
Vanpool	N	N	N	N	35	37	36	37
Other ^b	N	N	N	N	6	7	7	7
All modes	N	N	N	N	15	15	15	15
Energy consumption, diesel (million gallons)								
Motor bus	N	N	N	563 ^u	564 ^u	578 ^u	^R 598	554
Heavy rail	NA							
Light rail	NA							
Trolley bus	NA							
Demand responsive	N	N	N	15	29	31	R32	44
Ferry boat ^a	N	N	N	20	22	22	24	24
Commuter rail	N	N	N	53	63	62	R63	78
Other ^b	N	N	N	R<1	< 1	< 1	< 1	<1
Total	208 ^u	271 ^u	431 ^u	651	678	693	R717	700

KEY: ~ = included in heavy rail figure; + = included in motor bus figure;
 N = data do not exist; NA = not applicable;
 P = preliminary; R = revised

Performance cont'd	1960	1970	1980	1990	1995	1996	1997	1998 ^P
Gasoline and other nondiesel fuels ⁹	192 ^v	68 ^v	11 ^v	33 ^v	61 ^v	61 ^v	^R 59 ^v	50 ^v
Compressed natural gas	U	U	U	U	11	15	^R 24	31
Total	192	69	11	34	71	76	^R 83	81
Energy consumption (million kWh)								
Motor bus	NA	NA						
Heavy rail	N	N	N	3,284 ^w	3,401 ^w	3,332 ^w	3,253 ^w	3,280 ^w
Light rail	N	N	N	239	288	321	^R 361	383
Trolley bus	N	N	N	69	100	69	78	74
Demand responsive	NA	NA						
Ferry boat ^a	NA	NA						
Commuter rail	N	N	N	1,226	1,253	1,255	^R 1,270	1,480
Other ^b	N	N	N	19	26	30	^R 26	33
Total	2,908 ^w	2,561 ^w	2,446 ^w	4,837	5,068	5,007	R4,988	5,250
Safety ^h								
Fatalities, all modes	N	N	N	339	274	264	275	286
Injured persons, all modes	N	N	N	54,556	57,196	55,288	56,132	55,990
Incidents, all modes	N	N	N	90,163	62,471	59,392	^R 61,561	60,094

^a Excludes international, rural, rural interstate, island and urban park ferries.

Includes cable car, inclined plane, aerial tramway, monorail, vanpool, and automated guideway.

SOURCES: Unless otherwise noted, refer to chapter tables for sources.

KEY: ~= included in heavy rail figure; + = included in motor bus figure;
 N = data do not exist; NA = not applicable;
 P = preliminary; R = revised

^c Beginning in 1992, local operating assistance and other revenue declined by about \$500 million due to change in accounting procedures at the New York City Transit Authority. Beginning in 1992, total operating expense declined by about \$400 million due to a change in accounting procedures at the New York City Transit Authority.

^dIncluded in other.

^e The total figure represents the number of transit agencies. It is not the sum of all modes since many agencies operate more than one mode.

f Based on employee equivalents of 2,080 hours equals one employee; beginning in 1993, based on number of actual employees.

^gLiquefied natural gas, liquefied petroleum gas, methanol, propane, and other nondeisel fuels, except compressed natural gas.

^hU.S. Department of Transportation, Federal Transit Administration. *Safety Management Information Statistics (SAMIS)*, (Washington, DC: Annual reports).

ⁱ American Public Transportation Association, *Transportation Fact Book* (Washington, DC: 2000), tables 21, 22, D2 and similar tables for prior years.

^j Ibid., 2000 edition table 25, and similar tables in earlier years Ibid., 2000 edition table 24, and similar tables in earlier years.

¹ Ibid., 2000 edition table 18, and similar tables in earlier years.

^m Ibid., 2000 edition table 20, and similar tables in earlier years.

ⁿ Ibid., 2000 edition table 1, and similar tables in earlier years.

 $^{^{\}rm o}$ Ibid., 2000 edition table 46, and similar tables in earlier years.

^p Ibid., 2000 edition table 62, and similar tables in earlier years.

^q Ibid., 2000 edition table 42, and similar tables in earlier years.

^r Ibid., 2000 edition table 26, and similar tables in earlier years.

^s Ibid., 2000 edition table 39, and similar tables in earlier years.

^t Ibid., 2000 edition table 44, and similar tables in earlier years.

^u Ibid., 2000 edition table 65, and similar tables in earlier years.

v Ibid., 2000 edition table 66, and similar tables in earlier years.

w Ibid., 2000 edition table 67, and similar tables in earlier years.

^x Ibid., 2000 edition table 17, and similar tables in earlier years.

y Ibid., 2000 edition table 30, and similar tables in earlier years.

Appendix A Modal Profiles ◀ 353

Financial	1960	1970 ^a	1980	1990	1995	1996	1997	1998
Class I ^b								
Operating revenues (\$ millions)								
Passenger	640 ^f	421 ^f	446 ^f	94 ^f	89 ^f	59 ^f	60 ^f	61 ^f
Freight	8,025	10,922	26,350	27,471	31,356	31,889	32,322	32,247
Other	849	649	1,462	805	835	745	736	843
Total	9,514	11,992	28,258	28,370	R32,279	32,693	33,118	33,151
Operating expenses (\$ millions) ^c	8,775	11,478	26,355	24,652	27,897	26, 331	27,291	27,916
Amtrak								
Total revenue (\$ millions)	N	162	429	1,308 ^h	1,497 ^h	1,555 ^h	1,674 ^h	2,285 ^h
Total expenses (\$ millions)	N	301	1,103	2,012	2,305	2,318	2,436	2,638
Inventory								
Class I ^b								
Number of vehicles								
Class I freight cars	1,658,292	1,423,921 ^f	1,168,114 ^f	658,902 ^f	583,486 ^f	570,865 ^f	568,493 ^f	575,604 ^f
Other nonclass I freight cars	307,194	360,260	542,713	553,359	635,441	669,708	701,926	740,063
Freight cars, total	1,965,486	1,784,181	1,710,827	1,212,261	1,218,927	1,240,573	1,270,419	1,315,667
Locomotives	29,031	27,077	28,094	18,835	18,812	19,269	19,684	20,261
Number of companies	106	71	38	14	11	10	9	9
Number of employees	780,494	566,282	458,994	216,424	188,215	181,809	177,981	178,222
Miles of road owned	207,334	196,479	164,822	119,758	108,264	105,779	102,128	100,570
Amtrak								
Number of vehicles								
Passenger								
Train-cars	N	1,569 ^g	2,128 ^g	1,863 ^h	1,722 ^h	1,730 ^h	1,728 ^h	1,962 ^h
Locomotives	N	185	419	318	313	299	332	345
Number of employees	N	1,500 ^j	21,416 ^j	24,000 ^j	23,646	23,278 ^g	23,555 ^g	24,528 ^f
System route mileage	N	N	24,000 ^k	24,000 ^k	24,000	25,000 ^h	25,000 ^h	22,000 ^h

KEY: N = data do not exist; R = revised; U = data are not available



Performance	1960	1970 ^a	1980	1990	1995	1996	1997	1998
Class I ^b								
Car mileage, freight (thousands)	28,170,000 ^f	29,890,000 ^f	29,277,000 ^f	26,159,000 ^f	30,383,000 ^f	31,715,000 ^f	31,660,000 ^f	32,657,000 ^f
Train mileage, freight (thousands)	404,464	427,065	428,498	379,582	458,271	468,792	474,954	474,947
Locomotive mileage (thousands)								
Freight	421,900 ¹	1,278,200	1,319,010 ¹	1,144,559 ¹	1,293,851 ¹	1,311,351 ¹	1,281,768 ¹	1,285,706
Train and yard switching	N	N	212,040	135,806	150,840	153,798	141,461	153,997
Total	N	N	1,531,050	1,280,365	1,444,691	1,465,149	1,423,229	1,439,703
Revenue ton-miles of freight (millions)	572,309 ^f	764,809 ^f	918,958 ^f	1,033,969 ^f	1,305,688 ^f	1,355,975 ^f	1,348,926 ^f	1,376,802 ^f
Average length of haul, freight (miles)	461	515	616	726	843	842	851	835
Fuel consumed in freight service (million gallons)	3,463	3,545	3,904	3,115	3,480	3,579	3,575	3,583
Average miles traveled per vehicle								
Locomotive	N	N	54,497	67,978	76,796	76,037	72,304	71,058
Car	14,332	16,753	17,113	21,579	24,926	25,565	24,921	24,822
Average miles traveled per gallon								
Train	0.12	0.12	0.11	0.12	0.13	0.13	0.13	0.13
Car	8.13	8.43	7.50	8.40	8.73	8.86	8.86	9.11
Amtrak								
Passenger train car-miles (millions)	N	213 ^m	235 ^m	301 ^m	292 ^p	276 ^p	288 ^p	312 ^p
Passenger train-miles (millions)	N	26	30	33	32	30	32	33
Passenger locomotive-miles (millions)	N	N	41	49	48	U	U	U
Revenue passengers carried (millions)	N	17	21	22	21	20	20	21
Revenue passenger-miles (millions)	N	3,039	4,503	6,057 ^h	5,545 ^h	5,050 ^h	5,166 ^h	5,304 ^h
Average passenger fare (dollars)	N	8.3 ⁿ	17.7	38.5	39.0	42.5	44.3	44.0
Average passenger revenue/								
passenger-mile (cents)	N	4.5	8.2	14.1	14.6	16.6	17.3	17.5
Average passenger trip length (miles)	N	182.6	217.0	273.0	267.6	256.9	255.8	251.5
Locomotive fuel consumed								
Diesel (million gallons)	N	N	64	82	66 ^q	71 ^q	75 ^q	75 ^q
Electric kWh (millions)	N	N	254	330	304	293	282	275

KEY: N = data do not exist; R = revised; U = data are not available

Rail Profile

Safety ^{d,o}	1960	1970 ^a	1980	1990	1995	1996	1997	1998
Number of fatalities, railroads and grade crossings								
Passenger on trains	34	10	4	3	0	12	6	4
Employees on duty	215	179	97	40	34	33	37	27
Employees not on duty	N	N	4	0	2	0	0	2
Trespassers	637	607	566	700	660	620	646	644
Non-trespassers	1,459	1,535	^R 746	^R 554	443	365	363	326
Contractor employees	N	N	7	3	7	9	11	5
Railroad and grade crossing, total	2,345	2,225	1,417	1,297	1,146	1,039	1,063	1,008
Grade crossing only	1,421	1,440	^R 772	698	579	488	461	431
Railroad only ^e	924	785	^R 645	599	567	551	602	577

^a Amtrak data in this column are for 1972, Amtrak's first full year of operation.

NOTE: Amtrak figures are based on Amtrak fiscal year (October 1-September 30).

SOURCES: Unless otherwise noted, refer to chapter tables for sources.

^b Excluding Amtrak and all non-Class I railroads, except for Section IV.

^c Operating expenses include equipment, joint facility rents, leased roads and equipment, and all taxes except Federal income.

^d Safety figures from U.S. Department of Transportation, Federal Railroad Administration are for all railroads.

^e Figures may not appear directly in data source.

^f Association of American Railroads (AAR), Railroad Facts, Annual issues, 1990-1998, pp. 3, 10, 12, 13, 14, 33, 34, 36, 40, 44, 48, 50, 56, 78.

g Amtrak, National Railroad Passenger Corporation Annual Report, 1972, 1980, 1990, 1993-95.

^h Ibid., Statistical Appendix to Amtrak Annual Report, annual issues.

ⁱ Ibid., Human Resources Information Center, personal communication.

^j Ibid., Public Affairs, personal communication.

KEY: N = data do not exist; R = revised;U = data are not available

^kIbid., Route Miles by Railroad, Corp. Planning & Development.

¹ Association of American Railroads (AAR), Analysis of Class 1 Railroads, annual issues.

^mAmtrak, Train Information System Reports.

ⁿIbid., Train Earnings Reports.

^{°1960-80:} U.S. Department of Transportation, Federal Railroad Administration, Systems Support Division, RRS-22, personal communication.

^{1990-96:} Ibid., Accident/Incident Bulletin, annual issues, tables 7 and 9.

^{1997-98:} Ibid., Railroad Safety Statistics, Annual Report 1998, table 1-3.

^pAmtrak Corporate Reporting, Route Profitability System, Washington D.C., personal communication, June 1999.

^qAmtrak General Accounting, Pennsylvania, personal communication, June 1999.

Financial	1960	1970	1980	1990	1995	1996	1997	1998
Operating revenues (\$ millions)								
Domestic freight	1,722 ⁱ	2,070 ⁱ	7,219 ⁱ	7,940 ⁱ	7,712 ⁱ	7,684 ⁱ	^R 6,901 ⁱ	6,886 ⁱ
Coastal waterways	747	834	3,155	3,066	2,774	2,782	^R 2,169 ⁱ	2,115 ⁱ
Inland waterways	461	621	2,395	2,956	2,964	3,044	R2,860	2,801
Great lakes	227	239	513	615	585	579	^R 615	612
Locks, channels	287	376	1,156	1,303	1,389	1,279	1,257	1,358
International freight ^h	1,765	3,187	8,279	12,181	^R 14,069	17,281	^R 14,091	15,679
Passenger, total	281	287	304	^R 1,386	^R 1,709	^R 1,800 0	^R 1,180 0	1,147
Domestic passenger, intercity	14	12	21	^R 99 ^u	^R 129 ^u	^R 141 ^u	^R 141 ^u	147 ^u
International passenger ^a	267	275	283	1,287 ⁱ	1,580 ⁱ	1,659 ⁱ	^R 1,039 ⁱ	1,000 ⁱ
Revenues of U.S. commercial fishing								
Fleet (domestic landings) (\$ millions)	354 ^j	613 ^j	2,237 ^j	3,522 ^j	3,770 ^j	3,487 ^j	R 3,448 ^j	3,128 ^j
Inventory								
Number of domestic inland Vessel operators ^b	228 ^k	380 ^k	403 ^k	565 ^k	557 ^k	554 ^k	U	U
Number of employees								
Ships, boat building, and repairing	141,200 ^l	171,800 ^l	220,500	187,700 ^m	159,600 ⁿ	158,800 ⁿ	^R 158,300 ⁿ	165,900 ⁿ
Water transportation ^c	N	212,300	211,200	176,600	174,500	174,100	^R 178,700	180,000
Number of employees ^d								
Passenger/combo	8,560 °	2,178 °	618 °	642 °	642 °	321 °	321 °	321 ^c
Cargo	28,668	22,257	9,878	7,019	5,400	4,964	4,831	4,924
Tankers	12,053	10,567	8,722	4,471	4,261	3,965	3,785	3,711
Total	49,281	35,000	19,218	12,132	10,303	9,250	8,937	8,956
Mileage of commercially Navigable channels	25,000 ⁱ	26,000 ⁱ	26,000 ⁱ	26,000 ⁱ	26,000 ⁱ	26,000 ⁱ	^R 26,000 ⁱ	26,000 ⁱ
Number of vessels								
Total nonself-propelled	16,777 ^p	19,377 ^p	31,662 ^p	31,209 ^p	31,360 ^p	32,811 ^p	33,011 ^p	33,509 ^p
Dry cargo barges and scows	14,025	15,890	27,426	27,091	27,342	28,743	29,006	29,526
Tankers	2,429	3,281	4,166	3,913	3,985	4,036	3,971	3,952
Railroad car floats	323	206	70	13	33	32	34	31

KEY: N = data do not exist; R = revised; U = data are not available

Inventory cont'd	1960	1970	1980	1990	1995	1996	1997	1998
Total self-propelled	6,543	6,455	7,126	8,236	8,281	8,293	8,408	8,523
Dry cargo/passenger	1,796	1,761	2,036	2,678	2,804	2,782	2,905	2,938
Ferries, railroad car	31	17	67	135	172	173	183	213
Tankers	489	421	330	213	178	161	147	135
Towboats/tugs	4,203	4,248	4,693	5,210	5,127	5,177	5,173	5,237
U.S. merchant marine ships (over 1,000 gross tons)								
Total U. S. flag	2,926 ^q	1,579 ^q	864 ^q	636 ^q	509 ^q	495 ^q	477	470
Passenger/cargo	309	171	65	10	13	15	14	12
Freighters	2,138	1,076	471	367	295	292	288	289
Bulk carriers	57	38	20	26	20	15	14	15
Tankers	422	294	308	233	181	173	161	154
Privately owned	1,008	U	578	408	319	302	285	281
Government owned	1,918	U	286	228	190	193	192	189
Number of recreational boats (thousands) ^e	2,500 ^r	7,400 ^r	^R 8,905 ^r	^R 10,996 ^r	^R 11,735 ^r	^R 11,878 ^r	12,313 ^r	12,567 ^r
Performance								
Ton-miles (thousands) ^f								
Domestic water freight								
Coastwise	N	359,784,000 ^s	631,149,247 ^s	479,133,600 ^s	440,345,100 ^s	408,086,100 ^s	349,843,000 ^s	314,863,900 ^s
Internal	N	155,816,000	227,342,991	292,393,300	306,329,100	296,790,600	R294,023,000	294,896,400
Lakewise	N	79,416,000	61,747,114	60,929,900	R59,703,800	58,335,300	R62,165,900	61,654,300
Intraport	N	1,179,000	1,596,412	1,087,000	1,349,600	1,474,500	1,378,100	1,380,700
Total	N	596,195,000	921,835,764	853,543,800	748,023,800	764,686,500	R707,409,900	672,795,000
Tons of freight hauled (thousands)								
Domestic								
Coastwise	209,197	238,440	329,609	298,637	266,612	267,389	R263,146	249,633
Internal	291,057	472,123	534,979	622,595	620,324	622,081	^R 630,558	625,028
Lakewise	155,109	157,059	115,124	110,159	116,127	114,870	R122,734	122,156
Intraport ^R	104,193	81,475	94,184	86,378	83,104	89,011	^R 89,816	90,077
Intraterritory	1,017	1,630	3,588	4,529	6,868	7,327	^R 6,273	7,217
Total	760,573	950,727	1,077,483	1,122,299	1,093,035	1,100,679	R1,112,527	1,094,112

KEY: N = data do not exist; R = revised; U = data are not available

Performance cont'd	1960	1970	1980	1990	1995	1996	1997	1998
Exports								_
Great lakes ports	23,150	35,932	45,077	32,898	32,968	31,855	33,209	36,876
Coastal ports	104,810	205,698	358,806	408,688	441,732	418,940	399,104	367,831
Total	127,961	241,629	403,883	441,586	474,700	450,794	432,313	404,708
Imports								
Great lakes ports	12,851	26,406	15,515	17,578	18,897	24,503	24,532	25,558
Coastal ports	198,466	312,934	502,006	582,412	653,760	708,090	763,771	815,122
Total	211,316	339,340	517,521	599,970	672,657	732,593	788,303	840,680
Average haul, domestic system (miles) ^f								
Coastwise	1,496	1,509	1,915	1,604	1,652	1,526	1,330	1,261
Internal	282	330	405	^R 470	494	477	466	472
Lakewise	522	506	536	553	514	508	507	505
Cargo capacity (short tons)								
Total nonself-propelled vessels	16,355,657 ^p	24,026,024 ^p	44,875,116 ^p	^R 48,946,785 ^p	51,140,530 ^p	54,086,973 ^p	54,974,961 ^p	55,999,952 ^p
Dry cargo barges	12,147,006	17,695,275	34,486,851	R38,189,490	39,971,443	42,748,644	43,710,093	44,718,691
Tankers	4,208,651	6,330,749	10,388,265	R _{10,757,295}	11,169,087	11,338,329	11,264,868	11,281,261
Total self-propelled vessels	15,905,881	19,284,050	23,906,346	19,723,788	15,783,399	14,850,253	14,161,739	12,970,167
Dry cargo/passenger	12,188,956	10,815,977	8,011,587	7,042,263	6,484,707	6,208,011	6,685,719	6,371,425
Tankers	3,716,925	8,468,073	15,894,753	12,681,525	9,298,692	8,642,242	7,476,020	6,598,742
Fuel consumption (thousand barrels)								
Diesel fuel and distillate	18,730 ⁱ	19,503 ⁱ	35,201 ⁱ	52,310 ⁱ	47,098 ⁱ	51,848 ⁱ	50,180 ⁱ	50,609 ⁱ
Residual fuel oil	94,084	89,850	213,131	148,764	153,125	138,213	114,044	110,480
Gasoline	9,200	14,238	25,048	30,962	25,250	23,659	R23,659	22,767
Total	122,014	123,591	273,380	232,036	225,473	213,720	^R 187,883	183,856

KEY: N = data do not exist; R = revised; U = data are not available

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Water Transport Profile

Safety	1960	1970	1980	1990	1995	1996	1997	1998
Fatalities in waterborne transport (vessel casualties only)								
Freight	N	30 ^t	8 ^t	o ^t	0 ^t	0 ^t	2 ^t	0 ^t
Tankship	N	4	4	5	0	0	0	0
Passenger vessel	N	1	5	3	4	2	1	3
Tug/towboat	N	22	14	13	1	1	4	1
Offshore supply	N	N	N	2	2	2	0	3
Fishing vessel	N	77	60	47	18	38	22	35
Recreational vessel	N	N	N	3	20	3	7	5
MODU ⁹	N	N	N	0	0	0	4	0
Platform	N	N	N	1	0	1	0	1
Freight barge	N	N	N	0	0	0	5	2
Tank barge	N	Н	N	0	0	0	0	0
Miscellaneous	N	44	56	11	1	3	1	9
Total	N	178	206	85	46	50	46	59
Injuries in waterborne transport								
Freight	N	14	8	10	1	0	3	4
Tankship	N	19	9	13	5	5	1	0
Passenger vessel	N	10	10	51	50	60	37	29
Tug/towboat	N	10	27	19	18	12	20	15
Offshore supply	N	N	N	9	10	7	3	5
Fishing Vessel	N	13	28	31	32	32	25	33
Recreational vessel	N	N	N	2	19	7	5	6
MODU ^g	N	N	N	13	0	0	2	0
Platform	N	N	N	9	1	0	0	1
Freight barge	N	N	N	3	0	0	6	1
Tank barge	N	Н	N	3	3	1	0	0
Miscellaneous	N	39	98	12	6	5	7	13
Total	N	105	180	175	145	129	109	107

KEY: N = data do not exist; R = revised; U = data are not available

Safety cont'd	1960	1970	1980	1990	1995	1996	1997	1998
Fatalities in recreational boating (vessel casualties only)								
Air thrust	N	N	N	N	4 ^r	1 ^r	6 ^r	11 ^r
Propeller	N	N	N	N	475	363	^R 436	462
Inboard	N	119 ^r	100 ^r	50 ^r	N	N	N	N
Outboard	N	774	609	454	N	N	N	N
Inboard/outboard	N	28	47	53	N	N	N	N
Jet	N	N	10	25	68	61	83	82
Sail	N	44	43	20	4	8	15	5
Manual (oars, paddle)	N	205	272	182	148	109	150	151
Other	N	29	14	5	8	8	10	0
Propulsion unknown	N	219	265	76	122	159	121	104
Total	739 ^r	1,418	1,360	865	829	709	821	815

- ^a Revenues paid by American travelers to U.S. and foreign flag carriers.
- b Does not include vessel operators whose primary area of operation is fishing, towing, passenger transport, ferrying, or crew boat utility service.
- ^c Includes commercial port, marina, and other employees; excludes employees of non-for-hire private businesses.
- d Estimate based on established active jobs for licensed and unlicensed personnel aboard oceangoing ships of 1,000 gross-tons and over, privately owned and operated, government-owned ships under bare boat charters, ship managers and General Agency Agreement, supplemented by Military Sealift Command employment totals for ships with Civil Service crews.
- ^e The U.S. Coast Guard changed its methodology for counting the number of recreational boats.
- Figures cited represent number of numbered boats, not estimates as previously noted for 1960 and 1970.
- f Does not include intraterritorial traffic (traffic between ports in Puerto Rico and the Virgin Islands, which are considered a single unit).
- g Mobile Offshore Drilling Units.
- h The international water freight operating revenues data was revised in Transportation in America 1998 for all years expect 1994 & 1996. Therefore, the international water freight data for years 1994 & 1996 may not be comparable to other years.

SOURCES: Unless otherwise noted, refer to chapter tables for sources.

- ⁱ Eno Transportation Foundation Inc., Transportation in America, 1999 (Washington, DC: 2000), pp. 40, 42, 57, 64.
- J. U.S. Department of Commerce, National Marine Fisheries Services, Fisheries of the United States (Washington, DC: Annual issues), p. 5 and similar tables in earlier editions.

k U.S. Department of Transportation, Maritime Administration, MAR-450, personal communication. KEY: N = data do not exist; R = revised; U = data are not available

- U.S. Department of Labor, Bureau of Labor Statistics, Employment, Hours and Earnings, United States, 1909-1994, (Washington, DC: September 1994), SICs 373 and 44.
- ^m Ibid., Employment, Hours and Earnings, 1988-1996 (Washington, DC: August 1996), SICs 373 and 44.
- ⁿ Ibid., Internet website www.bls.gov, as of April 21, 2000.
- O U.S. Department of Transportation, Maritime Administration, U.S. Merchant Marine Data Sheet (Washington, DC: Annual issues).
- P U.S. Army, Corps of Engineers, Summary of U.S. Flag Passenger & Cargo Vessels (New Orleans, LA: Annual issues).
- ^q U.S. Department of Transportation, Maritime Administration, *Merchant Fleets of the World* (Washington, DC: Annual issues).
- ^r U.S. Coast Guard, *Boating Statistics* (Washington, DC: Annual issues).
- S U.S. Army Corps of Engineers, Waterborne Commerce of the United States (New Orleans, LA: Annual issues), part 5, section 1, table 1 & table 4.
- ^t U.S. Coast Guard, Office of Investigations and Analysis, G-MAO-2, personal communication.
- ^u U.S. Department of Commerce, Bureau of Economic Analysis, Selected NIPA Tables, table 2.4, Internet website http://www.bea.doc.gov, as of August 21, 2000.

Oil Pipeline Profile

Financial	1960	1970	1980	1990	1995	1996	1997	1998
Operating revenues (\$ millions)								
FERC-regulated	770 ^c	1,188 ^c	6,340 ^c	^R 7,045 ^c	^R 6,962 ^c	7,262 ^c	^R 7,264 ^c	7,300 ^c
Nonregulated	125	208	1,208	1,342	^R 1,316	1,373	^R 1,343	1,356
Total	895	1,396	7,548	^R 8,387	^R 8,278	8,635	^R 8,607	8,656
Inventory								
Number of FERC-regulated companies	87 ^d	101 ^d	130 ^d	150 ^d	161 ^d	160 ^d	U	U
Number of employees, pipeline companies ^a	23,100 ^e	17,600 ^e	21,300 ^e	18,500 ^f	^R 15,100 ^g	14,500 ^g	^R 14,200 ^g	13,800 ^g
Miles of pipeline (statute miles) ^b								
Crude lines	141,085 ^h	146,275 ^h	129,831 ^h	118,805 ^h	^R 129,423 ^h	^R 92,610 ^h	91,523 ^h	87,663 ^h
Product lines	49,859	72,396	88,562	89,947	^R 92,177	^R 84,925	88,350	90,985
All lines	190,944	218,671	218,393	208,752	221,600	177,535	179,873	178,648
Performance								
Intercity ton-miles (millions)								
Crude oil	N	N	362,600 ⁱ	334,800 ⁱ	335,900 ⁱ	338,300 ⁱ	R337,400 I	334,100 ^l
Petroleum products	N	N	225,600	249,300	265,200	280,900	R279,100	285,700
Total	229,000 ⁱ	431,000 ⁱ	588,200	584,100	601,100	619,200	^R 616,500	619,800
Tons transported (millions)	468.4	790.3	960.8	1,057.4	^R 1,124.8	1,099.0	^R 1183.8	1,211.8
Average length of haul (statute miles)								
Crude oil	325 ^j	300 ^j	871 ^j	805 ^j	^R 747 ^j	^R 779 ^j	713	689
Petroleum products	269	357	414	389	R393	R393	393	393
Safety								
Fatalities	N	4 ^k	4 ^k	3 ^k	3 ^k	5 ^k	0 ^k	2 ^k
Injuried Persons	N	21	15	7	11	13	5	6
Incidents	N	351	246	180	188	^R 193	^R 171	153

^a Includes companies whose pipelines carry crude petroleum, petroleum products, and nonpetroleum pipeline liquids.

NOTE: The Interstate Commerce Committee regulated oil pipelines in the 1960s and 1970s. **SOURCES:** Unless otherwise noted, refer to chapter tables for sources.

^b Regulated plus unregulated mileage of crude oil trunk and gathering lines, plus refined oil trunk lines.

^c Eno Transportation Foundation, Inc., Transportation In America, 1998 (Washington, DC: 1998), p. 40.

^d Federal Energy Regulatory Commission, personal communication.

^e U.S. Department of Labor, Bureau of Labor Statistics, Employment, Hours and Earnings, United States, 1909-94 (Washington, DC: September 1994), SIC 46.

^f Ibid., Employment, Hours and Earnings, United States, 1988-1996 (Washington, DC: July 1996), SIC 46.

KEY: FERC = Federal Energy Regulatory Commission; N = data do not exist; R = revised; U = data are not available

^g Ibid., Internet website www.bls.gov, as of Apr. 19, 1999.

^h Eno Transportation Foundation, Inc., Transportation In America, 1998 (Washington, DC: 1998), p. 64; and Transportation in America, Supplement, 1999, (Washington, DC: 1999), p. xii.

ⁱ Ibid., pp. 44, 59, 46.

^j Ibid., p. 71.

^k U.S. Department of Transportation, Research and Special Programs Administration, Office of Pipeline Safety, DPS-35, personal communication, and Internet website http://ops.dot.gov, as of Mar. 18, 1999.

Natural Gas Pipeline Profile

Financial (\$ millions)	1960	1970	1980	1990	1995	1996 ^R	1997	1998
Transmission pipeline companies								
Total operating revenues	3,190 ^d	5,928 ^d	41,604 ^e	21,756 ^e	12,092 ^e	12,050 ^e	10,339 ^e	9,450 ^e
Total operating expenses ^a	2,698	5,088	39,709	19,484	9,534	9,603	7,862	6,795
Taxes (federal, state, local) ^b	319	376	1,991	1,245	1,582	1,643	1,531	1,481
Operation and maintenance	2,095	4,203	36,480	17,058	6,680	6,802	5,381	4,260
Distribution pipeline companies								
Total operating revenues	N	N	14,013 ^d	18,750 ^f	19,421 ^f	30,407 ^f	30,817 ^f	27,542 ^f
Total operating expenses ^a	N	N	13,263	17,125	17,402	27,917	R _{27,445}	25,039
Taxes (federal, state, local) ^b	N	N	1,136	1,625	1,888	2,668	^R 2,415	2,422
Operation and maintenance	N	N	11,791	14,544	14,170	23,301	^R 23,155	20,910
Investor-owned, total industry								
Total operating revenues	N	N	85,918 ^g	66,027 ^g	58,434 ^g	63,600 ^g	^R 62,660 ^h	57,117 ^h
Total operating expenses ^a	N	N	81,789	60,137	50,800	56,695	^R 55,422	50,896
Taxes (federal, state, local) ^b	N	N	4,847	4,957	6,186	6,362	^R 6,384	5,429
Operation and maintenance	N	N	74,508	51,628	40,041	45,785	^R 44,851	41,026
Inventory								
Pipeline mileage								_
Transmission	183,700 ^l	252,200 ^l	266,500 ^j	280,100 ^j	^R 268,300 ^j	259,300 ^j	^R 251,100 ^j	253,900
Distribution	391,400	594,800	701,800	837,300	R936,800	959,500	^R 957,100	980,800
Field and gathering	55,800	66,300	83,500	89,500	^R 60,400	57,500	R43,000	45,000
Total	630,950	913,267	1,051,774	1,206,894	1,262,152	1,276,315	R1251,200	1,279,700
Number of employees								
Investor-owned companies	206,400 ^k	211,700 ^k	215,400 ^l	204,200	179,000 ^l	^R 179,000 ^I	^R 154,600 ^I	151,500 ^l
Transmission pipeline companies	31,400	32,400	45,200	37,400	28,000	32,300	27,500	28,400
Distribution pipeline companies	N	N	52,100	64,700	61,600	79,700	^R 75,000	69,700
Integrated pipeline companies	N	N	53,200	39,900	36,400	12,700	12,300	13,600
Combination pipeline companies	N	N	52,200	50,100	42,100	38,700	30,600	30,400
Total	N	N	202,700	192,100	168,100	163,500	145,400	142,100
Number of interstate natural gas pipeline companies ^c	87 ^m	89 ^m	91 ^m	132 ^m	133 ⁿ	138 ⁿ	86 °	86 °

KEY: N = data do not exist; R = revised

Appendix A Modal Profiles

Natural	Gas	Pipe	elin	e P	rofi	le
		Contid				

Performance (million cubic ft.)	1960	1970	1980	1990	1995	1996 ^R	1997	1998
Marketed production, total	12,771,038 ^p	21,920,642 ^p	20,179,724 ^p	18,593,792 ^p	19,506,474 ^p	^R 19,812,241 ^p	^R 19,866,093 ^p	19,645,554 ^p
Delivered to consumers, total	10,382,681 ^q	19,018,462 ^q	18,216,233 ^q	16,818,882 ^q	19,660,161 ^q	20,005,508 ^q	R20,004,012 ^q	19,469,047 ^q
Consumed, total	11,966,537	21,139,386	19,877,293	18,715,090	21,580,665	R21,966,616	R21,958,660	21,262,023
Gas used as a pipeline fuel, total	347,075	722,166	634,622	659,816	700,335	711,446	^R 751,470	635,477
Safety								
Fatalities	N	26 ^r	15 ^r	6 ^r	18 ^r	48 ^r	^R 10 ^r	17 ^r
Injured persons	N	233	177	69	53	114	^R 72	75
Incidents	N	1,077	1,524	198	161	187	^R 175	234

^a Does not add due to omission of line from source table for depreciation and other non-cash expenses.

NOTE: Numbers may not add to totals due to rounding.

SOURCES: Unless otherwise noted, refer to chapter tables for sources.

k Ibid., Gas Facts, 1979 (Arlington, VA),

KEY: N = data do not exist: R = revised

^b Figures obtained by addition/subtraction and may not appear directly in data source.

^c As of Sept. 30 each year.

^d American Gas Association, Gas Facts, 1979 (Arlington, VA), table 134.

^e Ibid., Gas Facts (Arlington, VA: Annual issues), table 12-2, and similar tables in earlier editions.

f Ibid., table 12-3, and similar tables in earlier editions.

g Ibid., table 12-1.

^h Ibid., Unpublished data and personal communication, Aug 17, 2000.

ⁱ Ibid., Gas Facts, 1979 (Arlington, VA), table 44.

¹ Ibid., Gas Facts (Arlington, VA: Annual issues), table 5-1, and similar tables in earlier editions.

¹ Ibid., Gas Facts (Arlington, VA: Annual issues), table 14–2, and similar tables in earlier editions.

^m U.S. Department of Energy, Energy Information Administration, Statistics of Interstate Natural Gas Pipeline Companies (Washington, DC: Annual issues), preface.

ⁿ Federal Energy Regulatory Commission, personal communication.

^o American Gas Association, personal communication, Aug 17, 2000.

^p U.S. Department of Energy, Energy Information Administration, Natural Gas Annual, 1998 (Washington, DC: October 1999), table 98. Internet site http://www.eia.doe.gov /oil_gas/natural_gas/data_publications/natural_gas_annual/nga.html as of Aug 9, 2000.

^q Ibid., Table 100.

U.S. Department of Transportation, Research and Special Programs Administration, Office of Pipeline Safety, DPS-35, personal communication, and Internet site http://ops.dot.gov/stats.htm, as of Aug. 9, 2000.